

SPACE CONQUERORS!

BY AL STENZEL

FASTER THAN THE SPEED OF LIGHT, THE GIANT SPACE CRUISER HURTLES THROUGH THE VOID TOWARD ITS DESTINATION... MARS!

GENERAL QUARTERS!
ALL HANDS TAKE LANDING STATIONS! TEST CREWS STAND BY TO DEBARK!

FIRST HUMANS TO LAND ON MARS!
WONDER WHAT IT'LL BE LIKE?

PRETTY DRY I IMAGINE...
GOT ALL YOUR TESTING GEAR READY, BOB?

ALL READY, DOC

BY DEFT SPACEMANSHIP, THE SLEEK CRAFT IS BROUGHT DOWN TO THE SURFACE OF MARS, TAIL FIRST, USING ROCKET BURSTS TO BRAKE THE DESCENT.

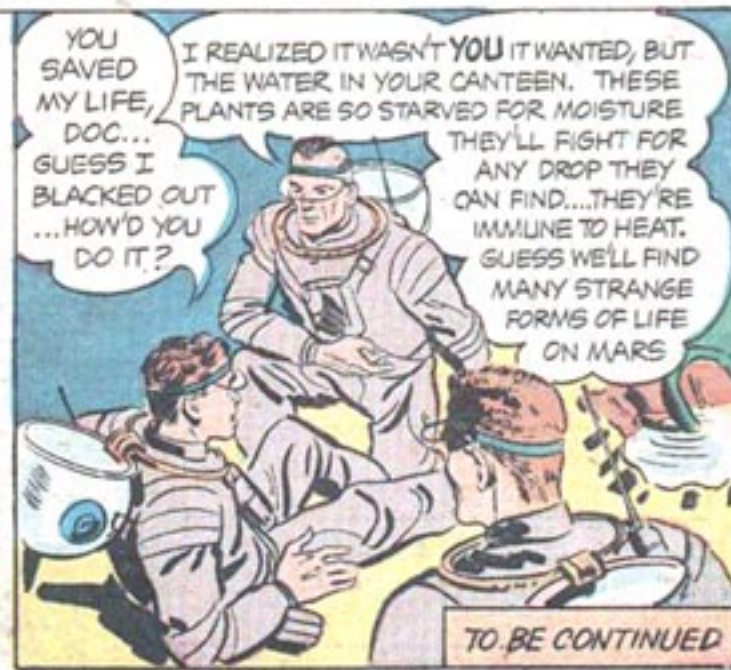
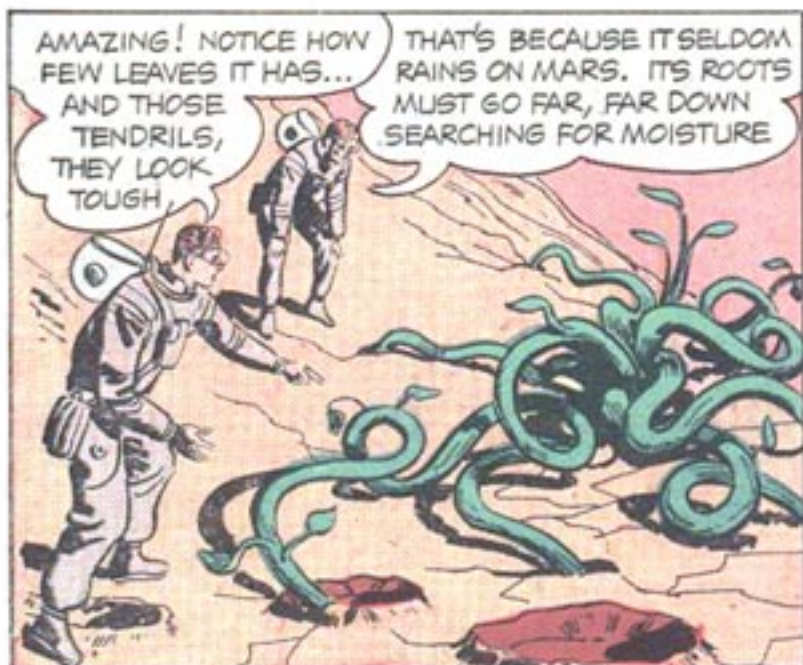
SECTION D WITH ATOMIC RIFLES WILL ACCOMPANY TEST CREW AS GUARDS. STAND BY AIR LOCKS!

OXYGEN CONTENT OF AIR LOW BUT SAFE TO BREATHE... SPACE HELMETS NOT NEEDED...

NO HARMFUL ATOMIC RADIATION... HUMIDITY DANGEROUSLY LOW... EXPLORATION PARTIES MUST CARRY EXTRA WATER RATIONS

NO SIGNS OF LIFE AT ALL EXCEPT FOR SOME VEGETATION IN THAT VALLEY

LET'S GO DOWN AND HAVE A LOOK



SPACE CONQUERORS!

BY AL STENZEL

AFTER THEIR NEAR-TRAGIC EXPERIENCE WITH A VORACIOUS, WATER-SEEKING PLANT, THE FIRST EARTHMEN TO LAND ON MARS SET OUT TO SOLVE THE MYSTERY OF ITS STRANGE CANALS...

WHEN! EVEN WITH MARS' LIGHT GRAVITY, CLIMBING HILLS IN THIS THIN AIR IS HARD ON THE LUNGS! I FEEL...HEY, THERE'S A CANAL IN THAT VALLEY!

AND IF THAT ISN'T A BUILDING DOWN THERE, I'LL EAT MY SPACE HELMET! LOOK HOW IT GLOWS!

LET'S GO DOWN AND LOOK IT OVER. WONDER HOW YOU SAY 'HELLO' IN MARTIAN?

HAVE YOUR RAY-GUN READY! THEY MAY NOT LIKE STRANGERS DROPPING IN!

WHAT AN **ODD** STRUCTURE! JUST GLOWS BY ITSELF, YET I HAVE A FEELING WE'RE BEING STUDIED!

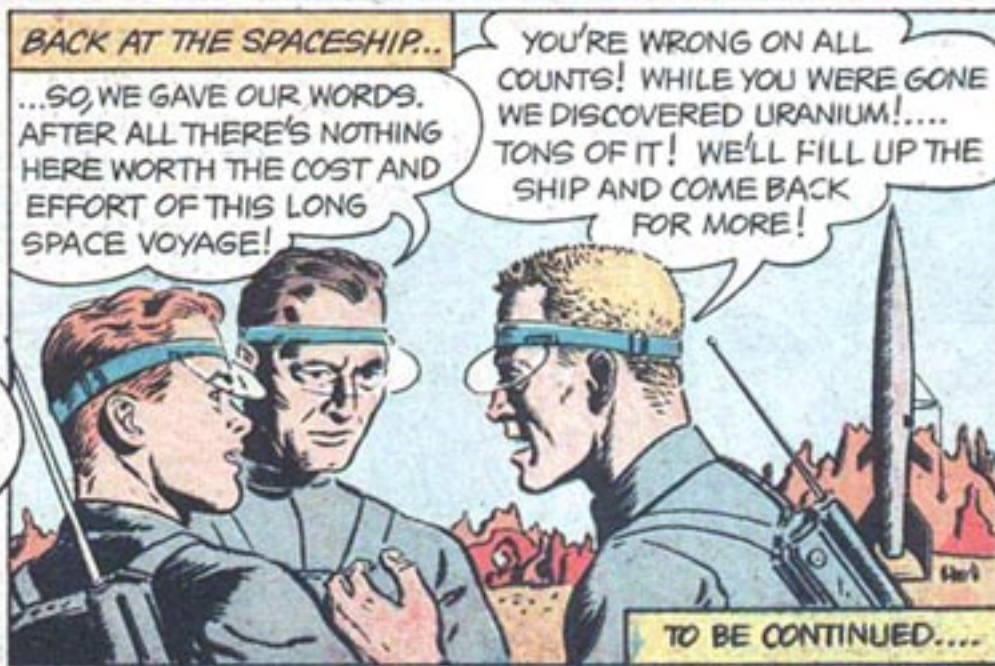
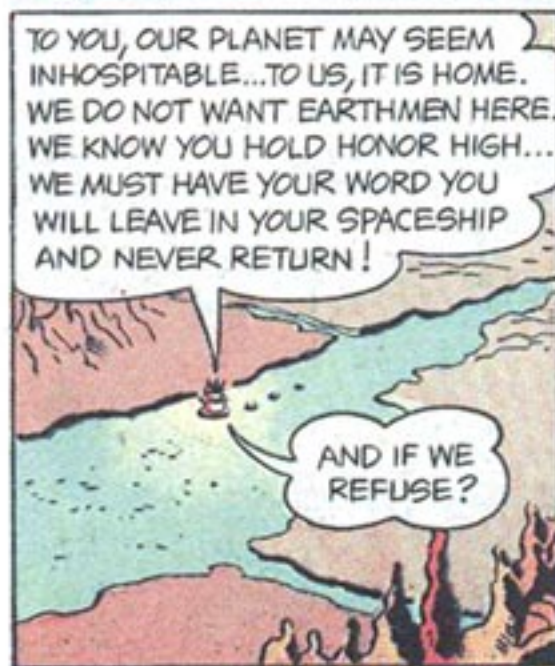
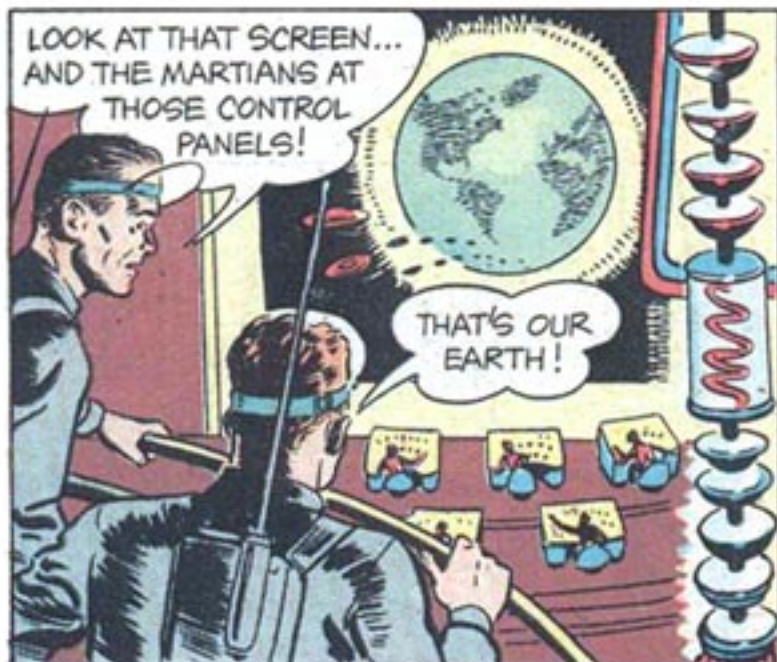
IT'S A COMPLICATED GADGET...MUST BE AN AUTOMATIC MACHINE. THERE'S AN OPENING...LET'S SEE WHAT'S INSIDE!

WHOA! STAY BACK! THAT MEANS STOP IN ANY LANGUAGE!

THERE HE IS...MY RAY-GUN WILL TEACH HIM HOW TO GREET VISITORS!

NO-NO...HE ONLY WARNED US...HE'S POINTING FOR US TO GO IN THERE

SPAT!!!



SPACE CONQUERORS!

BY AL STENZEL

THE FIRST EARTHMEN, LED BY DOC AND RED, TO REACH MARS FIND INTELLIGENT BEINGS THERE WHO WARN THEM TO RETURN TO EARTH OR RISK DESTRUCTION BY TERRIBLE, **REMOTE-CONTROLLED DEATH RAYS!**

THESE MARTIANS ARE SO FAR AHEAD OF US IN SCIENCE WE HAVE NO CHOICE BUT TO DO AS THEY SAY. THEY COULD BLAST US TO DUST WITH THE TURN OF A DIAL!

SEEMS FUNNY ONLY DOC AND RED SAW THESE MARTIANS...AND WERE ABLE TO TALK TO 'EM!

YEAH, HOW COME THEY LET US LAND IN THE FIRST PLACE, IF THEY'RE SO SMART?

YOU AND DOC WANT TO SCARE US INTO LEAVING, THEN YOU TWO WILL COME BACK LATER AND GRAB OFF THE FORTUNE IN URANIUM!

LET'S LOAD UP WITH THE ORE!

SURE! THEY DREAMED UP THAT STORY

IF THEY WON'T HELP, LEAVE 'EM HERE!

DON'T BE FOOLS, MEN! WE CAME TO EXPLORE, NOT TO STEAL URANIUM!

THE FORTUNE-MAD CREW, DISREGARDING ALL DOC'S AND RED'S WARNINGS, FEVERISHLY MINE THE HUGE URANIUM DEPOSIT AND LOAD THEIR SPACE SHIP...SUDDENLY...

WE CAN'T STOP THEM, RED. THEY WON'T LISTEN TO US, THE FOOLS

LOOK, DOC...THOSE DISKS SPEEDING THIS WAY! THEY'RE MARTIAN CONTROLLED ROBOT SHIPS...WARN THE CREW!

QUICK! OUR ONLY CHANCE IS TO DESTROY THEIR CONTROL STATION...FOLLOW US!

YOU WERE WARNED, EARTHMEN! NOW YOU SHALL FEEL THE MIGHT OF MARS!



THEY'RE CONCENTRATING ON THE MINE, DOC. WE MUST STOP THEM BEFORE THEY DESTROY OUR SPACE-SHIP!

THERE'S THE CONTROL STATION... AIM FOR THOSE TOWERS ON THE ROOF!

IT'S A GOOD THING THEY NEVER HEARD OF OUR TYPE RAY GUN



WITH THE CRIPPLING OF THE CONTROL STATION, THE MARTIAN ROBOT SHIPS LOSE THEIR POWER AND CRASH TO THE GROUND...



COME ON! LET'S TEACH THESE MARTIANS NOT TO PULL TRICKS ON EARTHMEN! OPEN UP ON 'EM!

NO...WAIT... LET ME TALK TO THEIR LEADER!

DOC'S RIGHT, MEN. NOTHING IS TO BE GAINED BY FIGHTING! LET'S TRY TO WORK OUT A COMPROMISE!



AFTER A LONG PARLEY WITH THE MARTIANS, FRIENDLY RELATIONS ARE ESTABLISHED AND A TREATY SIGNED...

YOU EARTHMEN ARE VERY RESOURCEFUL. LET US HOPE AN INTERCHANGE OF CULTURE WILL BE OF BENEFIT TO BOTH PLANETS!

I HAVE NO DOUBT OF IT. WE CAN LEARN MUCH FROM EACH OTHER



WITH HER MISSION ACCOMPLISHED, THE GREAT SPACESHIP ROCKETS BACK TOWARD EARTH.

WE'RE SORRY ABOUT THE RUCKUS, DOC. GUESS WE SORT OF LOST OUR HEADS FOR A WHILE THERE

YOU AND RED SAVED US... AND MADE FRIENDS WITH THE MARTIANS INSTEAD OF DEADLY ENEMIES!

SPACE CONQUERORS!

BY AL STENZEL

THROUGH THE BLACKNESS OF OUTER SPACE THE FIRST SPACESHIP TO REACH MARS ROCKETS TOWARD ITS HOME PLANET, EARTH! ROUTINE DUTIES ARE SUDDENLY INTERRUPTED...



DOC!
SOMETHING'S
GONE HAYWIRE
WITH OUR
INSTRUMENTS!

WE'RE FAR OFF OUR
COURSE AND I CAN'T
BRING HER BACK

THOSE MARTIAN
ROBOT DISCS
MUST HAVE
DAMAGED OUR
CONTROLS, BUT
I CAN'T FIND
ANYTHING WRONG
WITH 'EM HERE!

OH, OH,
SOMEONE'S
GOT TO GO
OUTSIDE
AND LOOK
FOR THE TROUBLE

I GUESS
IT'S UP TO
RED
AND ME!



CUT THE ROCKETS AS SOON
AS WE'RE IN THE AIR LOCK.
I HAVE A HUNCH THE
DAMAGE IS NEAR
THE TUBES

HAVE THE MEN
STAND BY IN
CASE WE NEED
MORE TOOLS



EVERYONE IS SO INTENT ON THESE PREPARATIONS, THE SWIFT APPROACH OF AN UNCHARTED PLANETOID RUSHING UPON THE SPACESHIP IS UNNOTICED.



DOC! LOOK...
THAT THING'S
HEADING
RIGHT FOR
THE SHIP!

DOC TO PILOT! DOC TO PILOT!
BLAST OFF AT ONCE OR YOU'LL BE
HIT! WE'LL CUT LOOSE. DON'T
ARGUE...THIS IS AN
ORDER!



SORRY, RED, BUT IT'S BETTER FOR TWO OF US TO GO RATHER THAN THE WHOLE SHIP'S COMPANY!

SAVE IT, DOC, YOU WERE ABSOLUTELY RIGHT. MAYBE THEY'LL BE ABLE TO PICK US UP LATER



THE FORCE OF THE SHIP'S ACCELERATION, PLUS THE SPEED AND DIRECTION OF THE PLANETOID DRAW DOC AND RED INTO ITS GRAVITATIONAL PULL... THEY "FALL" TOWARD ITS RUGGED SURFACE.

DOC! WE'RE GOING TO CRASH!

IT'S PRETTY SMALL...NOT MUCH MASS, MAYBE WE'LL HIT EASY



HEY! JUST LIKE LANDING ON A FEATHER BED! YOU ALL RIGHT, DOC?

I'M OKAY, RED! MAN, WE'RE LUCKY TO LAND ON A LEVEL SPOT. IF OUR HELMETS HAD BEEN SMASHED ON A ROCK...



IF WE TOUCH HELMETS, WE CAN TALK AND SAVE THE BATTERIES. HOW ARE WE FIXED FOR AIR AND FOOD, DOC?

SHOULD HAVE ENOUGH FOR A FEW DAYS. IF WE COULD ONLY SIGNAL THE SHIP!



AND BACK ON THE SPACESHIP...

THAT SUDDEN BLAST CLEARED AWAY WHATEVER IT WAS THAT WAS JAMMING OUR CONTROLS, CAPTAIN!

SHIP'S RESPONDING, SIR!

GOOD...I'VE PLOTTED THE PLANETOID'S COURSE!

CONTINUED...



MILLIONS OF MILES IN OUTER SPACE, TWO MEN SACRIFICE THEMSELVES IN ORDER TO SAVE THEIR SPACESHIP FROM DESTRUCTION BY AN UNCHARTED PLANETOID RUSHING TOWARD IT.

INSTEAD OF THE INSTANT DEATH THEY EXPECTED, HOWEVER, THE TWO LAND SAFELY ON THE PLANETOID'S STRANGE METALLIC SURFACE.

LET'S LOOK THIS PLACE OVER AS LONG AS...WHOOPS!

CAREFUL, RED. WITH THIS LIGHT GRAVITY YOU MIGHT STEP RIGHT OFF INTO SPACE!



DOC, LOOK! OVER THERE... CAN THAT BE A BUILDING OF SOME KIND?

BY GEORGE! I BELIEVE IT IS! COME ON...



IT IS, THE RUINS OF A HUGE BUILDING! BUT HOW COULD ANYTHING LIVE ON THIS SMALL, AIRLESS PLANETOID?

VERY, VERY STRANGE! LET'S TAKE A CLOSER LOOK. MAYBE WE CAN FIND A CLUE THERE!



DOC! THAT'S A CHART OF OUR SOLAR SYSTEM! SEE, THERE'S OUR SUN, MERCURY, VENUS, EARTH, MARS, AND...

YOU'RE RIGHT... AND THERE'S A PLANET THAT DOESN'T EXIST! SAY, I'M BEGINNING TO SEE THE ANSWER TO THIS RIDDLE!



EARTH ASTRONOMERS HAVE LONG BELIEVED THAT THERE WAS ONCE A PLANET BETWEEN MARS AND JUPITER WHICH WAS SOMEHOW DESTROYED AND THE ASTEROIDS ARE THE REMAINS OF THAT EXPLODED PLANET

AND THIS SMALL PLANETOID MIGHT HAVE ONCE BEEN A PART OF IT?





DOC, HERE'S AN
OPENING INTO
THIS RUIN...
THERE'S A ROW
OF CARVED
FIGURES
INSIDE!
I'M GOING IN!

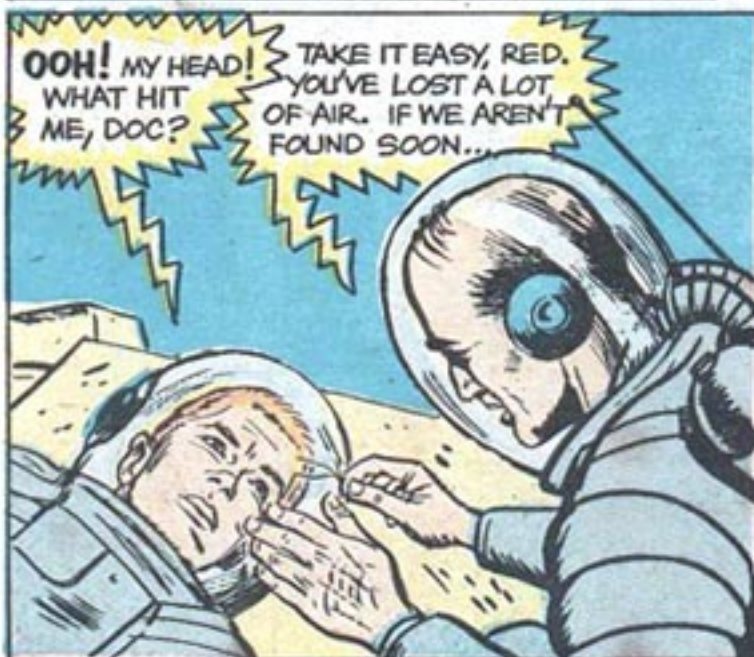
BE CAREFUL,
RED. THESE
RUINS ARE
DANGEROUS!



OUCH! I...
DOC! DOC!
MY HELMET...



THE FALL KNOCKED HIM
UNCONSCIOUS AND CRACKED
HIS HELMET. I'VE GOT TO PLUG
IT UP SOME WAY BEFORE HE
LOSES ALL HIS AIR!



OOH! MY HEAD!
WHAT HIT
ME, DOC?

TAKE IT EASY, RED.
YOU'VE LOST A LOT
OF AIR. IF WE AREN'T
FOUND SOON...



THERE ISN'T
MUCH HOPE
IS THERE,
DOC?

NOT MUCH, RED. TOO
BAD! I'D LIKE TO SEARCH
ONE OF THE LARGER
ASTEROIDS FOR MORE
EVIDENCES OF THE
CIVILIZATION THAT THIS
PLANETOID MUST ONCE
HAVE BEEN A PART



MEANWHILE, ABOARD THE
SPACESHIP...

THERE'S THE PLANETOID,
SIR. DO YOU THINK DOC
AND RED COULD HAVE
LANDED ON IT?

RESCUE
CREW...
STAND
BY FOR
LANDING

IF THEY
WEREN'T
KILLED BY
OUR ROCKET
BLAST THEY
MIGHT HAVE,
CIRCLE AROUND
IT SLOWLY

CONTINUED

SPACE CONQUERORS!

by
AL STENZEL

MARDOONED ON AN UNCHARTED PLANETOID, TWO EARTHMEN FACE CERTAIN DEATH FROM LACK OF FOOD AND OXYGEN, UNLESS THEIR SPACESHIP CAN FIND THEM IN THE IMMENSITY OF OUTER SPACE.



DOC!
MY AIR!

IT'S GETTING...
HARD...TO...
BR...BREATHE
...I...

EASY, RED, EASY!
A LOT OF YOUR AIR
ESCAPED WHEN YOU
CRACKED YOUR HELMET.
JUST LIE QUIETLY, I'M
SURE WE'LL BE
FOUND SOON



I'LL ADD SOME OF MY AIR
TO YOUR TANK WITH
THIS EMERGENCY
TUBE!

BUT, DOC,
THEN YOU'LL
BE TOO
LOW ON AIR!



THIS ATOM PISTOL
HAS ONLY ONE CHARGE
LEFT! PRAY THE SHIP IS
SOMEWHERE AROUND
TO SEE IT!



LOOKOUT
TO BRIDGE!
ATOMIC PISTOL
BLAST ON
PLANETOID,
BEARING 90°
RELATIVE!

THAT MUST BE RED AND
DOC! TAKE HER DOWN, LIVELY
NOW! RESCUE CREW REPORT
TO AIR LOCK! ALL HANDS
PREPARE FOR EMERGENCY
LANDING!



WE SAW
YOUR ATOMIC
SIGNAL!

GET RED TO THE SICK-
BAY QUICKLY...HE'S
ALMOST OUT OF AIR.
YOU DIDN'T
ARRIVE A
MINUTE
TOO SOON!

RIGHT,
DOC!
WE'LL TAKE
CARE OF
HIM!

A FEW HOURS LATER...

HE'S COMING ALONG FINE...BE AS GOOD AS NEW BY MORNING!

GIVING ME SOME OF YOUR AIR SAVED MY LIFE, DOC!

IF THE SHIP HADN'T SEEN OUR SIGNAL SHOT NEITHER OF US WOULD HAVE BEEN SAVED!

DOC, DO YOU STILL THINK THAT PLANETOID WAS ONCE PART OF A LOST PLANET?

YES, RED, AND THOSE RUINS WE SAW PROVED IT TO MY SATISFACTION. HERE'S HOW I FIGURE IT...

AT ONE TIME, NO ONE KNOWS HOW MANY MILLIONS OF YEARS AGO, THERE WAS A LARGE PLANET BETWEEN MARS AND JUPITER, PROBABLY INHABITED BY A HIGHLY ADVANCED CIVILIZATION!

IN SOME WAY THAT PLANET WAS DESTROYED. PERHAPS A WANDERING COMET CAME TOO CLOSE AND BOTH WERE TORN APART BY GRAVITATIONAL FORCES...OR

PERHAPS THEIR SCIENTISTS HAD DEVELOPED SOME TERRIBLE WEAPON OF DESTRUCTION, AND DURING A WAR HAD BLOWN THEIR WHOLE WORLD TO BITS...



WHEN THINGS FINALLY SETTLED DOWN, THE PIECES OF THAT PLANET FORMED WHAT WE CALL THE ASTEROID BELT, FOREVER REVOLVING AROUND OUR SUN IN THE SAME ORBIT!

I FOR ONE, WOULD LIKE TO SEARCH THE LARGER ASTEROIDS FOR EVIDENCES OF THAT LOST RACE!

WE'RE ALL FOR IT, DOC! LET'S BLAST OFF!

SPACE CONQUERORS!

By AL STENZEL

OFF TO SEARCH FOR EVIDENCES OF AN ADVANCED CIVILIZATION ON ONE OF THE LARGER ASTEROIDS, THE SPACESHIP FROM EARTH BLASTS A PERILOUS WAY INTO THE ASTEROID BELT!

KEEP ON YOUR TOES, MEN, WE'RE IN A MIGHTY CROWDED SECTION OF SPACE IN THIS ASTEROID BELT!

ONE HIT BY EVEN A SMALL ROCK WOULD BE OUR FINISH!

THERE'S CERES! IT'S THE LARGEST OF THE ASTEROIDS YET ONLY ABOUT 480 MILES IN DIAMETER. WE'LL START OUR SEARCH THERE

ALL HANDS STAND BY FOR LANDING. BREAK OUT SPACE SUITS AND HELMETS!

SEARCHING FOR A LOST CIVILIZATION ON THIS FLYING ROCK IS GOING TO BE A JOB, DOC! DURING THE CENTURIES ANY RUINS HAVE PROBABLY BEEN DEEPLY BURIED BY DEBRIS!

THERE **MUST** BE A CLUE, RED, SOME PLACE. REMEMBER THOSE IMAGES ON THAT ASTEROID?

DOC! COME HERE... I THINK I SEE LIGHTS 'WAY DOWN IN THIS CREVICE!

BY GEORGE! THOSE **ARE** LIGHTS DOWN THERE! BUT WHAT CAN THEY BE?

THERE'S NOT ENOUGH OXYGEN HERE TO CAUSE COMBUSTION AS WE KNOW IT!

DETERMINED TO SOLVE THE MYSTERY OF THE STRANGE LIGHTS, DOC AND RED BEGIN THE DESCENT INTO THE DEEP CHASM ON CABLES RIGGED BY THE SPACESHIP'S CREW...



DOC! THIS CREVICE IS REALLY DEEP! HOW FAR DOWN ARE WE NOW?

I'D SAY WE'RE NEARLY 10,000 FEET DOWN... THAT'S ALMOST 2 MILES! ...AND WE'RE STILL ONLY ABOUT HALF WAY TO THE BOTTOM!

GOOD THING THERE'S VERY LITTLE GRAVITY ON THIS SMALL ASTEROID!

EVEN SO, IF THAT CABLE SHOULD BREAK! HEY! I CAN SEE A REFLECTION OF LIGHT JUST BELOW!



THERE, RED! SEE IT? JUST AROUND THAT SPUR OF ROCK! SET YOUR RADIATION DEFLECTOR UP HIGH, WE CAN'T TAKE ANY CHANCES ON WHAT THAT GLOW MIGHT BE!

I'M WAY AHEAD OF YOU, DOC! MINE'S BEEN ON SINCE WE STARTED DOWN! I DON'T WANT TO BECOME RADIO ACTIVE!



THREE BRILLIANT GLOBES OF LIGHT JUST FLOATING IN SPACE! DOC! THAT'S IMPOSSIBLE!

FANTASTIC, RED, BUT NOT IMPOSSIBLE. THIS CAVERN IS ACTUALLY A VACUUM... THERE'S NO AIR PRESSURE. THE GRAVITY IS SO LIGHT THAT EQUAL ATTRACTION IS PROBABLY EXERTED FROM ALL DIRECTIONS ON EACH GLOBE AND ON EACH OTHER. NOTICE THAT THEY FORM AN EQUILATERAL TRIANGLE, TOO!



RED! I'M RIGHT! WE'RE WALKING ON WHAT WAS ONCE PAVEMENT! THERE **WAS** A CIVILIZATION HERE!

AND, DOC, LOOK! THERE'S A DOORWAY OVER THERE. COME ON... LET'S LOOK AT WHAT'S INSIDE!



CONTINUED

SPACE CONQUERORS!

BY AL STENZEL

HAVING MADE THEIR PERILOUS WAY FAR BELOW THE SCARRED SURFACE OF THE ASTEROID "CERES," IN THEIR SEARCH FOR A LOST CIVILIZATION, RED AND DOC FIND THEMSELVES BEFORE AN ANCIENT, RUINED DOORWAY.

YES, RED, THIS ASTEROID MUST ONCE HAVE BEEN PART OF THAT MISSING PLANET OUR ASTRONOMERS HAVE LONG BELIEVED EXISTED IN AGES PAST

AND WHOEVER OR WHATEVER LIVED ON IT HAD DEVELOPED A HIGH CIVILIZATION, COME ON, DOC, LET'S SEE WHAT'S INSIDE THE DOORWAY!



WE MUST HAVE WALKED AT LEAST A HALF MILE ALONG THIS TUNNEL!

WE'VE ALMOST REACHED THE END THERE'S ANOTHER DOORWAY. WONDER WHAT WE'LL FIND THROUGH THAT ONE?



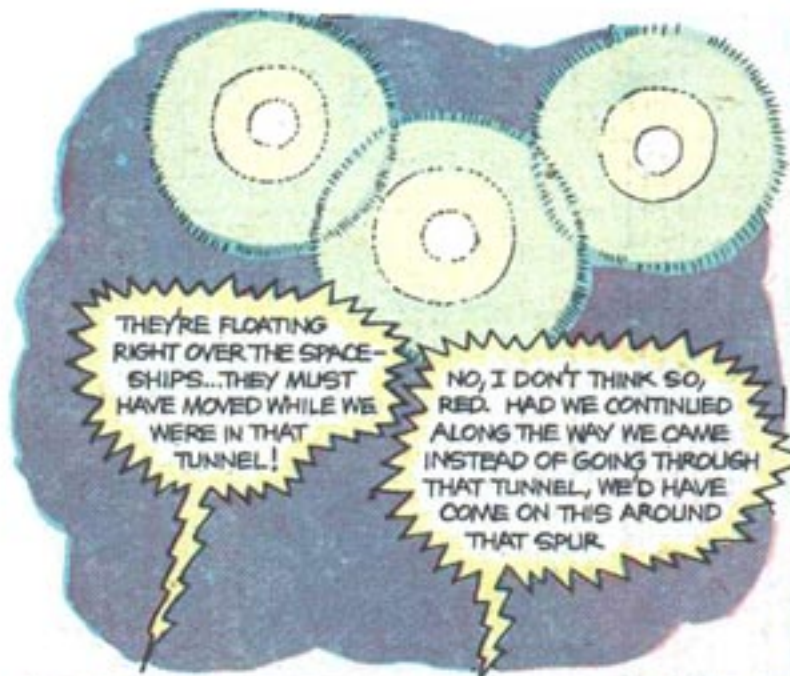
LEAPING LEONIDES
DOC! LOOK AT THOSE MACHINES! THIS PLACE HAS REALLY BEEN SOCKED!



DON'T YOU RECOGNIZE WHAT THEY ARE, RED? SPACESHIPS! A WHOLE FLEET OF 'EM! DESTROYED IN THEIR UNDERGROUND HANGAR!

GOSH! LIKE SITTING DUCKS! BUT WHY...DOC! LOOK...UP THERE...THOSE GLOBES OF LIGHT AGAIN!





THEY'RE FLOATING
RIGHT OVER THE SPACE-
SHIPS...THEY MUST
HAVE MOVED WHILE WE
WERE IN THAT
TUNNEL!

NO, I DON'T THINK SO,
RED. HAD WE CONTINUED
ALONG THE WAY WE CAME
INSTEAD OF GOING THROUGH
THAT TUNNEL, WE'D HAVE
COME ON THIS AROUND
THAT SPUR.



BUT, WHAT ARE
THEY? AND
WHY?

OF COURSE I AM ONLY
GUESSING, BUT, I'D SAY
THEY WERE FORMS OF PURE
ENERGY! THESE PEOPLE HAD
FOUND A WAY TO CREATE
ENERGY...PROBABLY TO USE
IN THEIR
SPACESHIPS!



LET'S TRY TO SEND OUR THOUGHTS BACK,
SAY, A HUNDRED MILLION YEARS IN TIME.
WE CAN PICTURE A PLANET INHABITED BY A
RACE OF PEOPLE, PERHAPS LIKE US. THEY
HAD DEVELOPED SUCH A HIGH STATE OF
CIVILIZATION THAT THEIR SCIENTISTS
HAD ALMOST DISCOVERED
THE SECRET OF
PURE ENERGY...



ON HIGH MOUNTAIN TOPS THEY HAD BUILT
HUGE OBSERVATORIES WITH POWERFUL
TELESCOPES THROUGH WHICH THEY
SEARCHED FAR INTO SPACE...THEN, ONE
DAY AN ASTRONOMER NOTICED A STRANGE
PIN-POINT OF LIGHT IN THE SKY...



FOR MONTHS ALL OBSERVATORIES CHECKED
THE COURSE OF THIS ON-RUSHING MENACE...

THIS IS A MOST ALARMING
REPORT! ACCORDING TO
THESE OBSERVATIONS, THIS
STRANGE VISITOR FROM
OUTER SPACE IS HEADED
DIRECTLY TOWARD
OUR WORLD!

WE MUST
REPORT THIS
TO THE HIGHEST
COUNCIL AT
ONCE!



...AND THEN THE HIGHEST COUNCIL, IN FULL
SESSION, HEARD THE TERRIFYING REPORT...

WE CAN NOTHING BE
DONE TO PREVENT
THIS SHATTERING
COLLISION?

WE ARE
DOOMED!

OUR WORLD IS
DOOMED YES. THIS
HUGE MASS RUSHING
TOWARD US WILL
DESTROY THIS PLANET.
BUT THERE IS A WAY
A FEW CAN ESCAPE!

TO TRANSLATE: HOLD UPON A MIRROR.

CONTINUED

SPACE CONQUERORS!

BY AL STENZEL

ON THE ASTEROID, "CERES," DOC AND RED DISCOVER A FLEET OF SPACE SHIPS LYING BROKEN AMONG THE ANCIENT RUINS OF A CIVILIZATION DESTROYED MILLIONS OF YEARS AGO. DOC CONTINUES HIS THEORY ON WHAT MIGHT HAVE OCCURRED...

IF THESE WERE SPACE SHIPS, DOC, WHY WEREN'T THEY STREAMLINED LIKE OURS?

I'D GUESS, BECAUSE THEIR SCIENTISTS HAD DISCOVERED A WAY TO OVERCOME GRAVITY OTHER THAN BY VELOCITY AS WE MUST DO

WE MUST ATTAIN TERRIFIC SPEED IN ORDER TO OFFSET GRAVITATIONAL PULL, AND STREAMLINING OUR ROCKETS CUTS DOWN ATMOSPHERIC RESISTANCE. THESE SHIPS PROBABLY ROSE SLOWLY UNTIL IN FREE SPACE AND THEN ZOOMED OFF FULL SPEED AHEAD!

WAIT TILL I BUZZ THE SHIP, DOC, AND LET THEM KNOW WE'RE OKAY. DON'T WANT 'EM TO WORRY ABOUT OUR SAFETY

FAR ABOVE, ON THE SURFACE OF THE ASTEROID...

WONDER HOW DOC AND RED... HERE THEY ARE NOW... **COME IN RED**

EVERYTHING COPIASETIC... GOT A LOT TO REPORT WHEN WE COME BACK TOPSIDE

GOOD! TELL 'EM WE'LL KEEP ON EXPLORING UP HERE

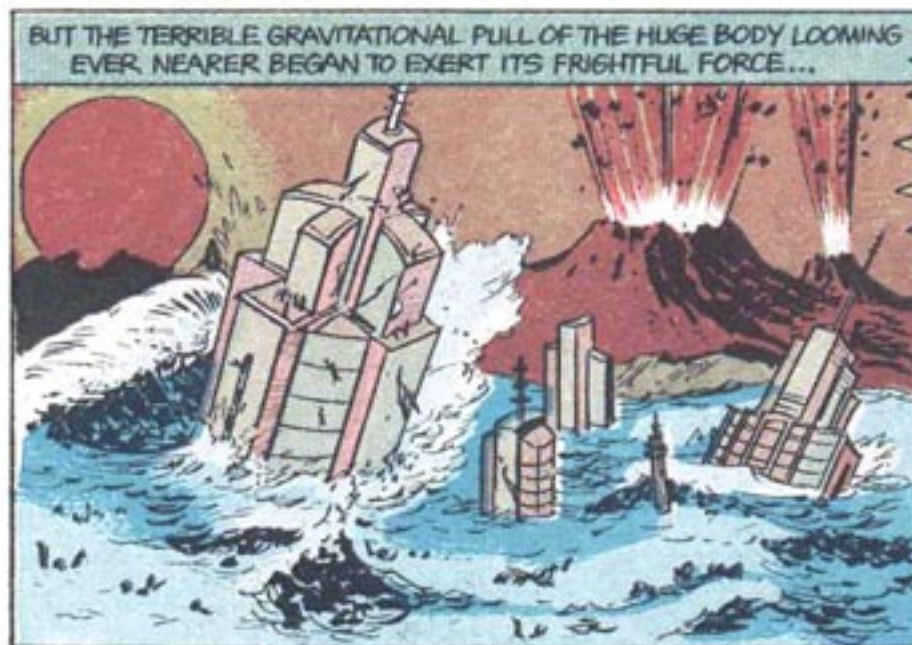
...AND MANY MILES BELOW, IN A DEEP CAVERN...

GO ON WITH YOUR STORY OF WHAT MIGHT HAVE HAPPENED HERE, DOC. YOU'VE GOT ME ALL EXCITED

WELL...YOU CAN IMAGINE THE SHOCK IT MUST HAVE BEEN FOR THE HIGH COUNCIL TO HEAR THAT ONLY A **FEW** COULD ESCAPE THE DESTRUCTIVE MASS RUSHING TOWARD THEIR DOOMED PLANET!

THE CHIEF OF TRANSPORTATION CONTINUED HIS STARTLING ANNOUNCEMENT...

WE HAVE COMPLETED OUR EXPERIMENTAL SPACE FLEET... BUT THERE IS ROOM FOR ONLY 200 ABOARD THEM, WITH ALL THE NECESSARY EQUIPMENT TO BEGIN A NEW LIFE ON ANOTHER PLANET!



SPACE CONQUERORS!

BY AL STENZEL

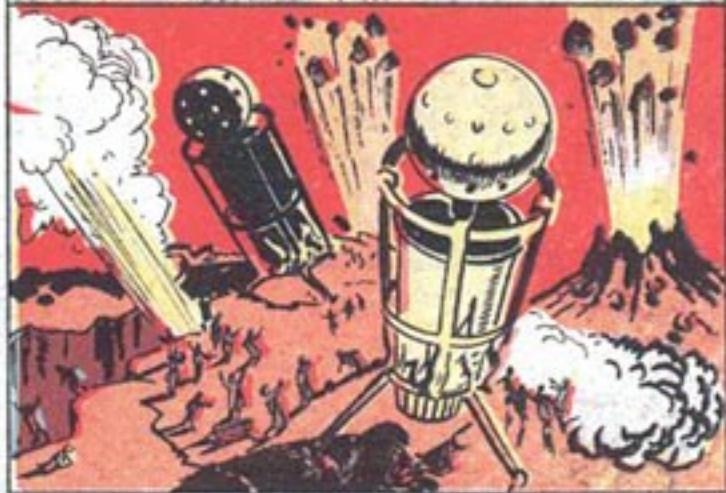
DISCOVERING THE RUINS OF A SPACE FLEET ON THE ASTEROID "CERES," TWO EARTHMEN IMAGINE WHAT MIGHT HAVE HAPPENED COUNTLESS MILLIONS OF YEARS AGO.

OF COURSE NO ONE WILL EVER KNOW WHAT REALLY CAUSED THE DESTRUCTION OF THIS MYSTERIOUS PLANET, RED

MAYBE A CLOSER LOOK AT THESE RUINS WILL GIVE US A CLUE. YOUR THEORY SOUNDS PLAUSIBLE, DOC. TELL ME MORE!



"FROM THE NUMBER OF RUINED SPACE-SHIPS HERE, I'D GUESS THAT JUST AS THE CROWD OF DOOMED PEOPLE STORMED THE FLEET OF LOADED SHIPS, NOW READY TO TAKE OFF..."



...IT WAS TOO LATE! THE DOOMED PLANET AND THE WANDERER FROM OUTER SPACE COLLIDED!



AND NOW ALL THAT IS LEFT OF WHAT MIGHT HAVE ONCE BEEN A GREAT CIVILIZATION ARE THOSE BROKEN AND TWISTED BITS OF METAL THAT WE THINK WERE SPACE SHIPS!

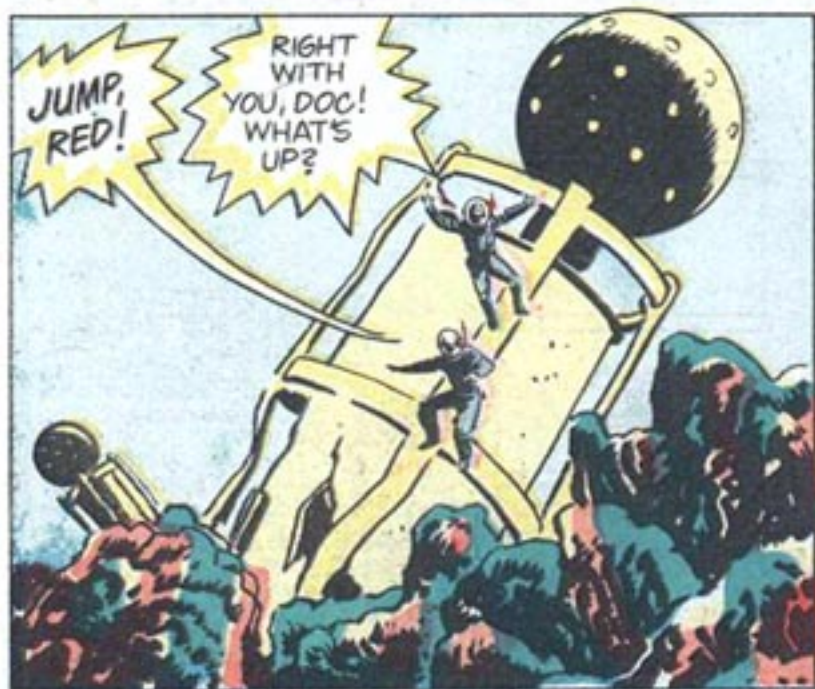
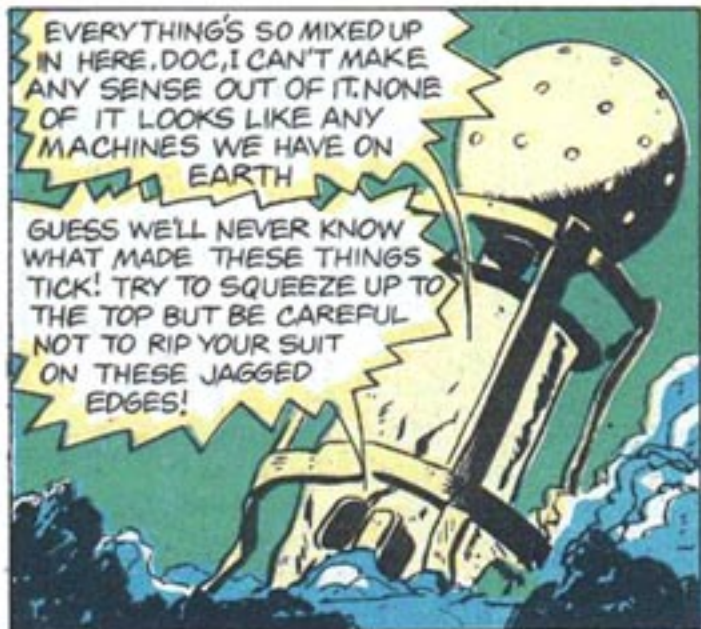
WHEW! YOU MADE IT SOUND SO REAL, DOC, I COULD ALMOST SEE IT HAPPEN!



LET'S SEE IF WE CAN GET INSIDE

WE BETTER BE GETTING BACK TO THE SURFACE SOON!



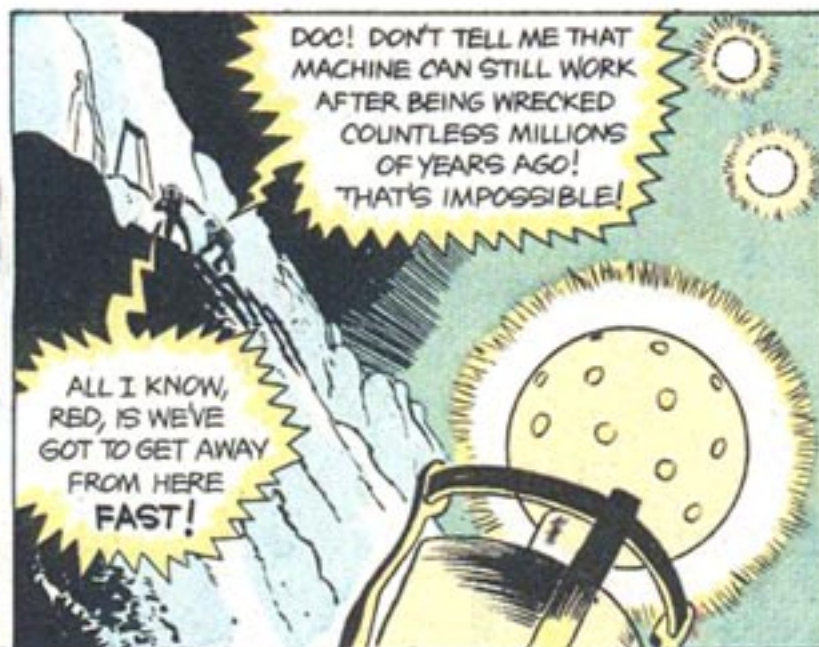


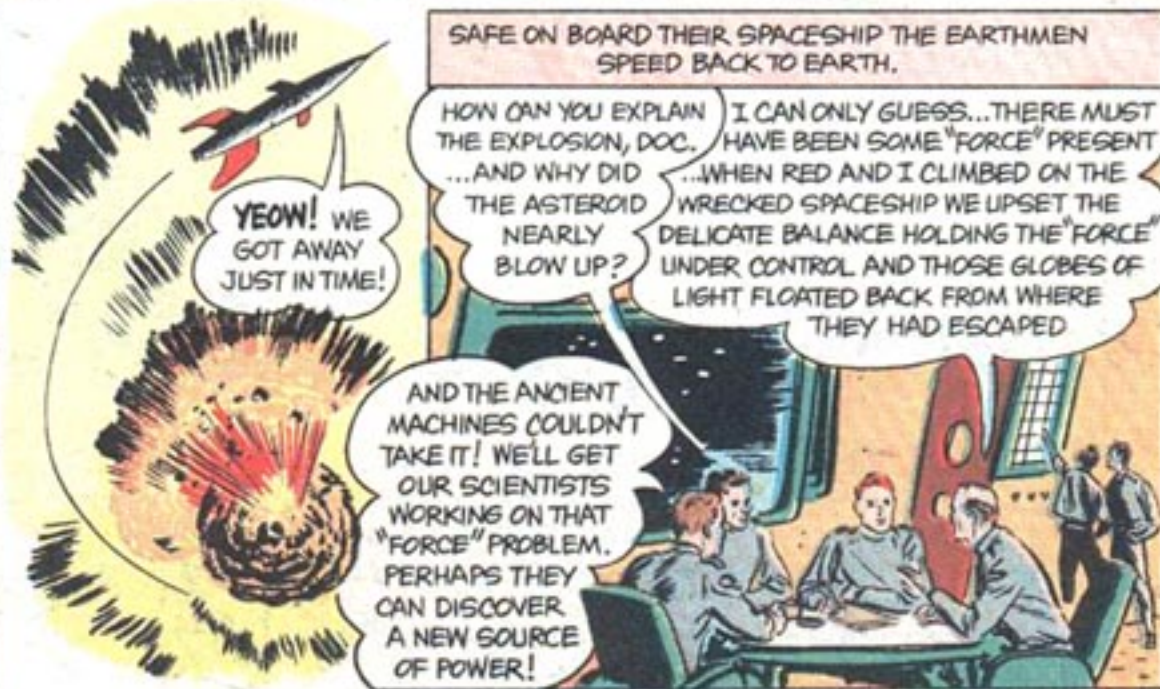
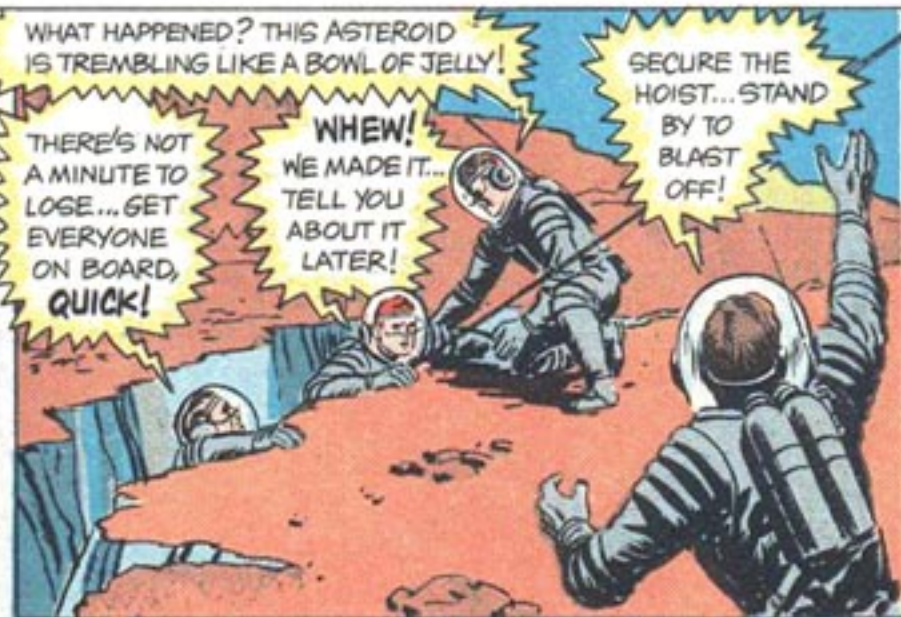
CONTINUED...

SPACE CONQUERORS!

BY AL STENZEL

WHILE INSPECTING A WRECKED SPACESHIP FAR BELOW THE SURFACE OF THE ASTEROID "CERES" TWO EARTHMEN STRUGGLE TO ESCAPE FROM THE DEEP CAVERN BEFORE THEY ARE TRAPPED BY A STRANGE HAPPENING...





SPACE CONQUERORS!

BY AL STENZEL

FROM ITS STATION, FAR OUT IN SPACE, A SPACE GUARD CUTTER IS DISPATCHED IN RESPONSE TO AN URGENT CALL FOR HELP FROM A DISABLED SPACE FREIGHTER. THE LAST FRANTIC MESSAGE RECEIVED BEFORE CONTACT WAS LOST STATED THE FREIGHTER WAS PLUNGING TOWARD THE SURFACE OF VENUS!

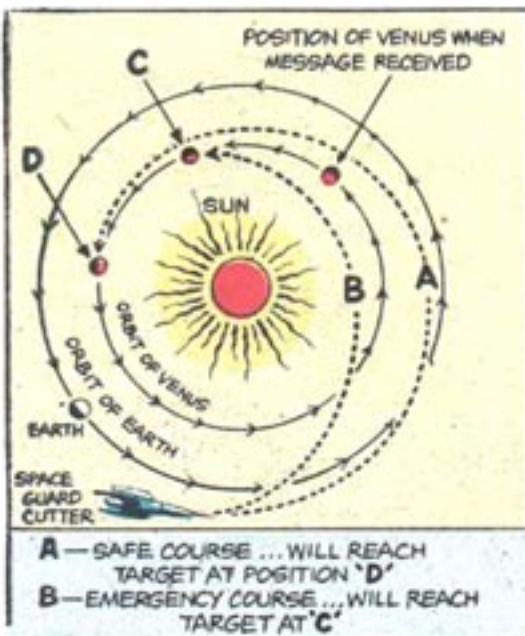
PRIORITY MESSAGE...
PROCEED AT BEST SPEED
...URGENT...RENDER ALL
ASSISTANCE!

ALL HANDS
STRAP DOWN...
FULL ROCKETS
FOR THREE
MINUTES!

SEND
MESSAGE TO
BASE...
PROCEEDING
ON EMERGENCY
COURSE...
FLANK SPEED!

THIS COURSE WILL
TAKE US DANGEROUSLY
CLOSE TO THE SUN'S
PULL, SIR!

WE'VE GOT TO
CHANCE IT! THAT
PULL WILL GIVE US
ADDED SPEED BUT
IT'S A RISK I KNOW.
ONE SLIP IN OUR
CALCULATIONS AND
WE'LL BE BURNED
TO A CINDER!

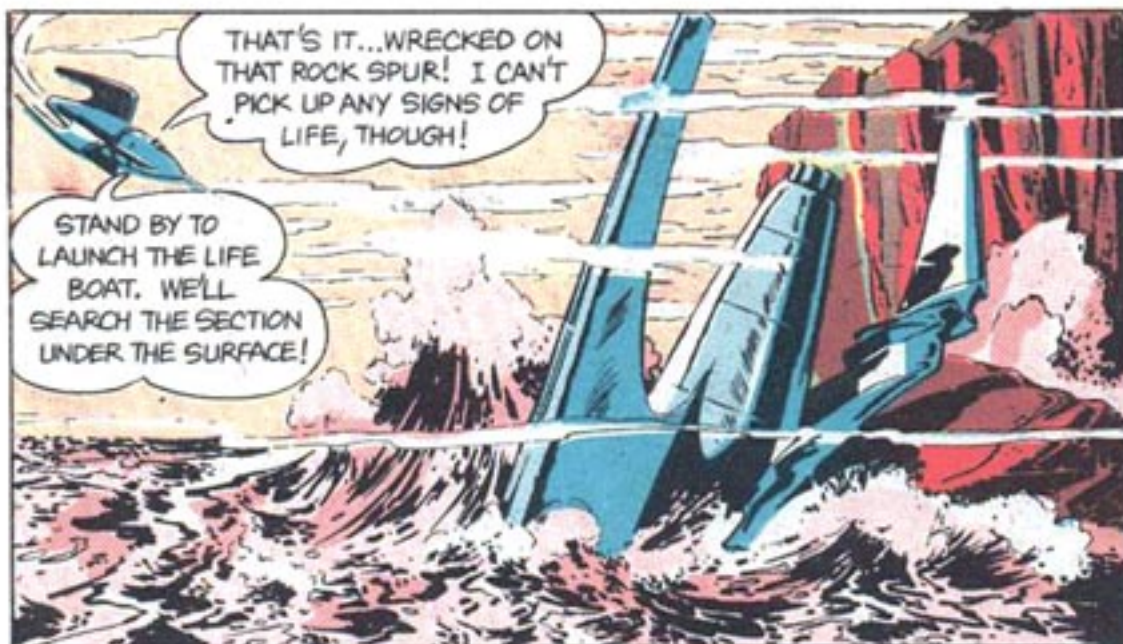


THE SHIP'S OUTER SKIN IS
NEAR THE MELTING POINT ON
THE SUN SIDE, SIR!

HOLD HER STEADY ON THE
COURSE...THE NEXT FEW
MINUTES WILL TELL...

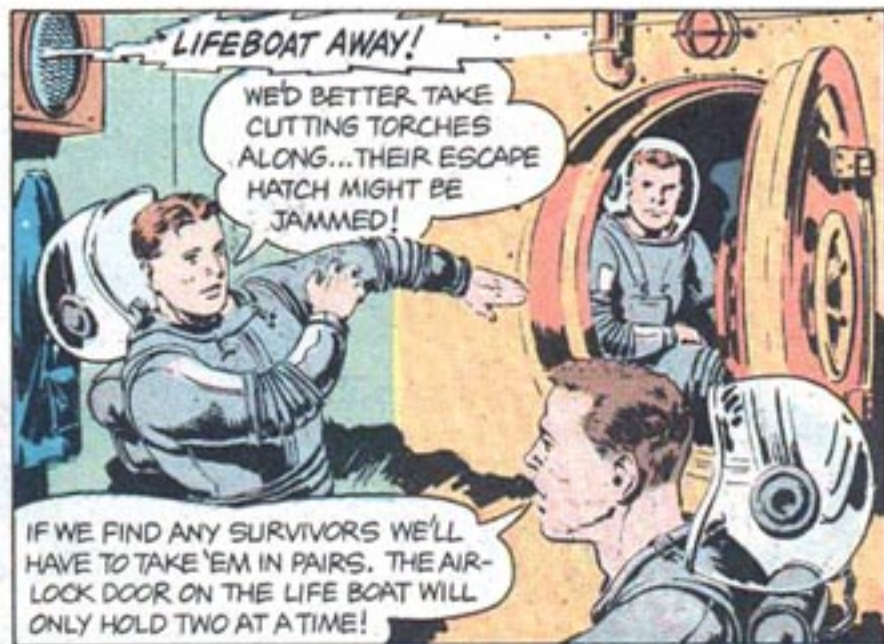
WE MADE IT! WHEW!
THAT WAS CLOSE, SIR.
BUT HERE WE ARE,
OVER VENUS!

THIS PLANET'S SO HIDDEN
IN MIST EVEN THE TELEVISOR
IS BLURRED...LOOK, SIR...
THAT MUST BE THE
FREIGHTER!



THAT'S IT...WRECKED ON THAT ROCK SPUR! I CAN'T PICK UP ANY SIGNS OF LIFE, THOUGH!

STAND BY TO LAUNCH THE LIFE BOAT. WE'LL SEARCH THE SECTION UNDER THE SURFACE!



LIFEBOAT AWAY!

WE'D BETTER TAKE CUTTING TORCHES ALONG...THEIR ESCAPE HATCH MIGHT BE JAMMED!

IF WE FIND ANY SURVIVORS WE'LL HAVE TO TAKE 'EM IN PAIRS. THE AIR-LOCK DOOR ON THE LIFE BOAT WILL ONLY HOLD TWO AT A TIME!



HELP! ANDY! I CAN'T GET THIS THING OFF ME!

HOLD IT AWAY FROM YOU...I'LL GIVE IT A BLAST FROM THIS CUTTING TORCH!



MAN, ARE WE GLAD YOU FOUND US! TWO OF OUR CREW WHO TRIED TO SET UP AN OUTSIDE AERIAL DISAPPEARED! WE COULD FIND NO TRACE OF THEM!

THIS PLANET HOLDS MANY UNKNOWN DANGERS. LET'S HURRY AND GET OUT OF HERE!



AFTER A NUMBER OF TRIPS THE ENTIRE FREIGHTER CREW WERE BROUGHT TO THE CUTTER.

SIGNAL THE BASE... MISSION COMPLETED

ANOTHER JOB OF THE SPACE GUARD WELL DONE!

SPACE CONQUERORS!

BY AL STENZEL

TO DISCOVER IF THERE IS ANY FORM OF LIFE ON THE MOON, TWO EARTH ECOLOGISTS* SEARCH THE UNEXPLORED LUNAR REGIONS.

**PLANT ECOLOGY: STUDY OF THE SPECIAL RELATIONSHIP BETWEEN PLANTS AND THEIR ENVIRONMENT.*



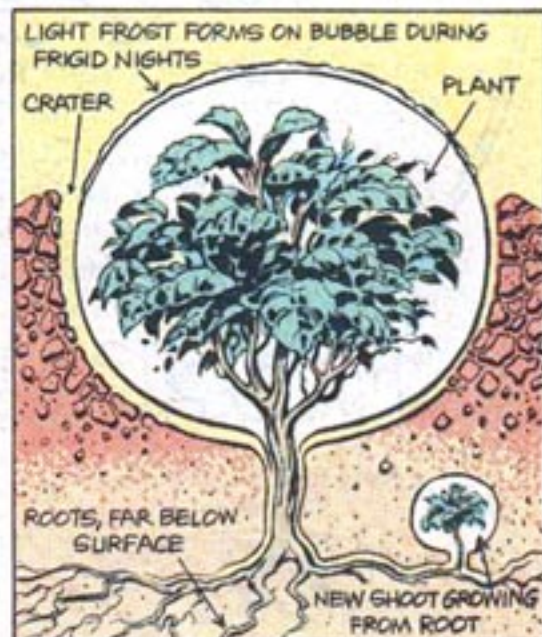
SKIMMING LOW OVER THE SURFACE THEY SEE AN AMAZING SIGHT...THE VALLEY FLOOR IS POCK-MARKED WITH CRATERS OUT OF WHICH SWELL HUGE TRANSPARENT BUBBLES! INSIDE EACH BUBBLE CAN BE SEEN A THICK TANGLE OF PALE GREEN FOLIAGE!



"A LIVING ORGANISM IN ITS OWN BUBBLE!" EXCLAIMS ONE. "REMINDS ME OF THE LITTLE SPIDER ON EARTH THAT CARRIES ITS OWN BUBBLE OF AIR WITH IT UNDER WATER."



IN AMAZEMENT THEY STARE AT ONE OF THE SHIMMERING GLOBES. IT IS COMPOSED OF A GELATINOUS SUBSTANCE, SECRETED BY THE PLANT, FORMING AN AIRTIGHT SHIELD WHICH PROTECTS THE PLANT FROM THE MOON'S TERRIFIC TEMPERATURE CHANGES...A REMARKABLE EXAMPLE OF ADAPTATION TO ENVIRONMENT!





LEANING FAR OVER FOR A CLOSER LOOK, ONE OF THE SCIENTISTS SLIPS! ATTEMPTING TO REGAIN HIS BALANCE HE PUSHES AGAINST THE QUIVERING GLOBE...BUT THE JELLY-LIKE SUBSTANCE OFFERS NO RESISTANCE AND HIS HEAVILY WEIGHTED BODY OOOZES COMPLETELY THROUGH THE BUBBLE INTO THE HEART OF THE EVIL-LOOKING PLANT.



HORRIFIED, HIS PARTNER DRAWS A KNIFE TO SAVE HIS UNFORTUNATE COMRADE. THE KEEN BLADE QUICKLY SLICES GREAT CHUNKS OUT OF THE GELATINOUS MASS.



ONCE THE PRESSURE WAS RELEASED FROM INSIDE THE BUBBLE THE ENTIRE PLANT COLLAPSED, FREEING THE TRAPPED EARTH-MAN, WHO QUICKLY SCRAMBLED OUT OF THE CRATER WITH THE AID OF HIS PARTNER.



SAFE AGAIN IN THEIR ROCKET SHIP, THE TWO SCIENTISTS TAKE OFF FOR EARTH WITH THEIR ALMOST UNBELIEVABLE TALE OF PLANT LIFE ON THE MOON.

SPACE CONQUERORS!

By Al Stenzel

SPEEDING THROUGH SPACE ON ITS WAY TO A DISTANT WORLD, A LECTURER ON BOARD A GIANT SPACELINER BREAKS THE MONOTONY OF THE LONG VOYAGE WITH A MOTION PICTURE SHOW...

"THIS FILM," EXPLAINS THE LECTURER, "SHOWS THE FIRST FLIGHT OF A POWERED FLYING MACHINE."



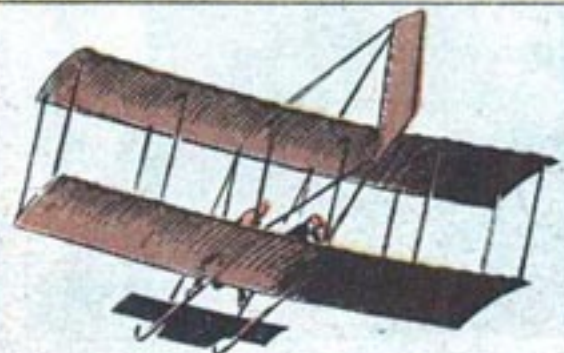
AND AS THE SCREEN COMES TO LIFE THESE SPACE TRAVELERS OF THE FUTURE SEE THE STORY OF EVENTS WHICH TOOK PLACE HUNDREDS OF YEARS BEFORE.



"...ON THE SAND DUNES OF KITTY HAWK, NORTH CAROLINA THEY MADE THEIR FIRST SUCCESSFUL GLIDER FLIGHT."



"RETURNING TO THEIR BICYCLE SHOP IN DAYTON, OHIO, THEY PONDERED ON THE PROBLEM OF MAKING A GLIDER THAT COULD BE STEERED, AND THE NEXT YEAR AT KITTY HAWK..."



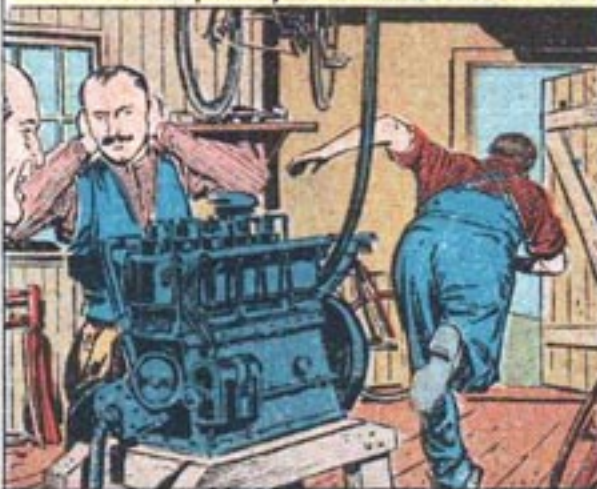
"TWO BROTHERS, NAMED ORVILLE AND WILBUR WRIGHT," BEGAN THE VOICE ON THE FILM'S SOUND TRACK, "WERE UNTIRING GLIDER ENTHUSIASTS. IN A.D. 1901..."

"WITH THE ADDITION OF A MOVABLE TAIL THE GLIDER COULD BE STEERED TO THE RIGHT OR LEFT AT THE PILOT'S WILL!"

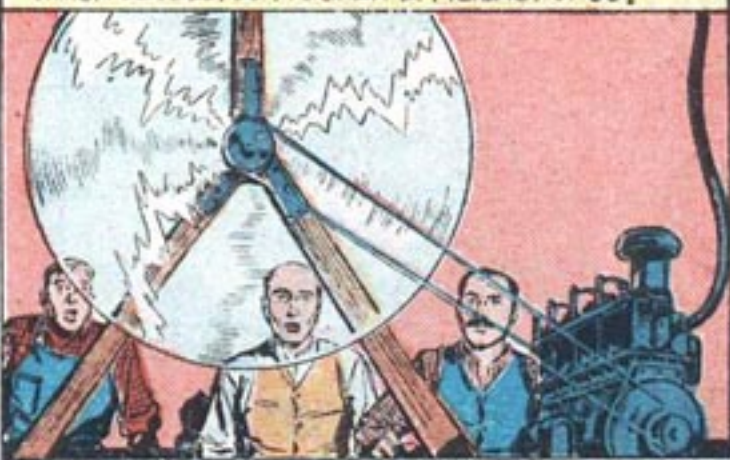
"NOW THE BROTHERS DECIDED TO ATTEMPT INSTALLING AN ENGINE AND A PROPELLER IN THEIR GLIDER..."



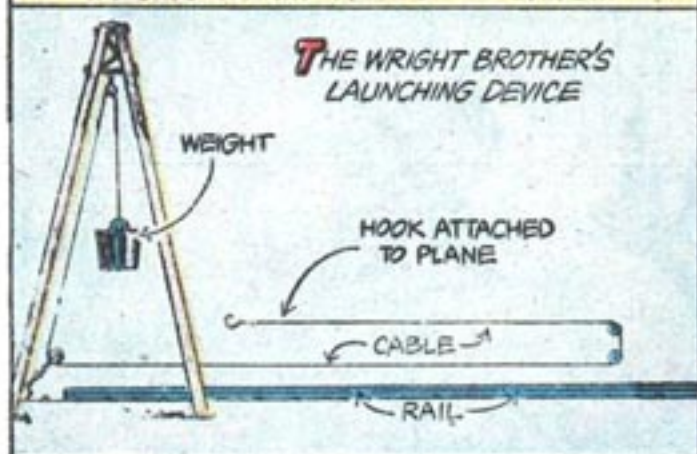
"AND, AGAIN, IN THEIR BICYCLE SHOP THEY BUILT THEIR FIRST GAS-ENGINE... WHICH MADE SUCH A ROARING CLATTER, THEIR HELPER CHARLIE TAYLOR, RUSHED OUTSIDE."



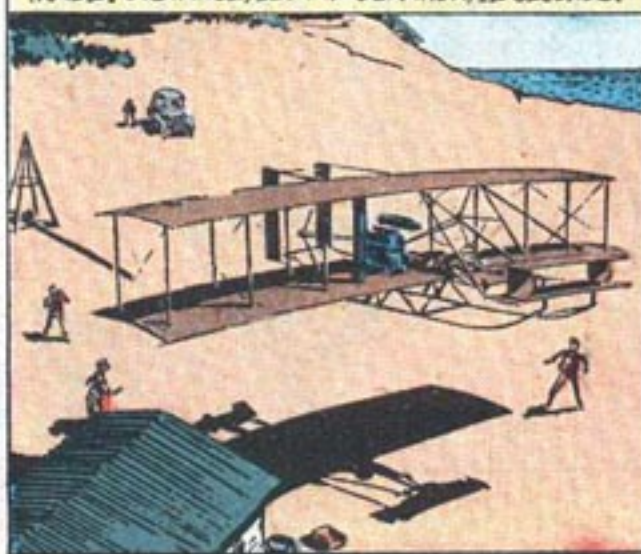
"DESIGNING A PROPELLER WAS A REAL PROBLEM. BUT, ORVILLE, HAD ALREADY MADE A CRUDE WIND TUNNEL (THE FIRST EVER BUILT) AND BY TESTING MANY SMALL MODELS IN IT FINALLY CAME UP WITH A PROPELLER WHICH DEVELOPED A SCREW EFFICIENCY OF 66!"



"NOW CAME THE GREAT TEST...ON THE MORNING OF DEC. 17, 1903, AGAIN AT KITTY HAWK, ORVILLE WRIGHT, LAID HIMSELF FACE DOWN ON THE LOWER WING OF THEIR FLYING-MACHINE. AS THE THIRTY-HORSE-POWER ENGINE ROARED, HIS BROTHER WILBUR, KICKED THE CHOCK FROM IN FRONT OF THE SKIDS..."



"...AND MAN'S FIRST CONQUEST OF THE AIR IN AN ENGINE-PROPELLED FLYING-MACHINE WAS MADE! DISTANCE, 120 FT.-DURATION, 12 SECONDS!"



AS THE FILM ENDS A SPONTANEOUS CHEER RISES FROM THE SPACE TRAVELING AUDIENCE IN TRIBUTE TO THE PIONEERS OF AVIATION... ORVILLE AND WILBUR WRIGHT!

SPACE CONQUERORS!

By AL STENZEL

ORDERED TO SEARCH THE NINE MOONS OF SATURN FOR A SPACE-PIRATE'S LAIR THE SPACE GUARD ROCKET-CUTTER "CAMBRIA" CIRCLES AROUND SATURN'S SMALLEST AND NEAREST MOON, MIMAS (ONLY 200 MILES IN DIAMETER)



FROM MIMAS, WHICH IS 15,000 MILES FROM THE RINGED PLANET, THE SPACE GUARD CUTTER SEARCHES ENCELADUS, TETHYS AND DIONE. THEY FIND NO EVIDENCE OF LIFE ON ANY OF THESE SATELLITES... BUT 760, 000 MILES FROM SATURN...



IN A HIDDEN VALLEY OF TITAN, THE LARGEST OF SATURN'S MOONS, THE VICIOUS SPACE PIRATES ANXIOUSLY WATCH THE PROGRESS OF THE SEARCH ON THEIR VISCO-RADAR SCOPE...



AND SET A TRAP TO LURE THE SPACE GUARD WITHIN RANGE OF THEIR DEADLY RAY GUNS...A BLACKENED AREA MADE TO LOOK AS THOUGH A ROCKET SHIP HAD BLASTED OFF!



"IF A SHIP HAD LEFT TITAN WE WOULD HAVE PICKED IT UP ON OUR INSTRUMENTS," EXCLAIMS THE SPACE GUARD CAPTAIN. "THE PIRATES ARE STILL THERE, PROBABLY WAITING FOR US TO LAND THINKING THEY HAVE GONE. WE'LL FOOL THEM!"



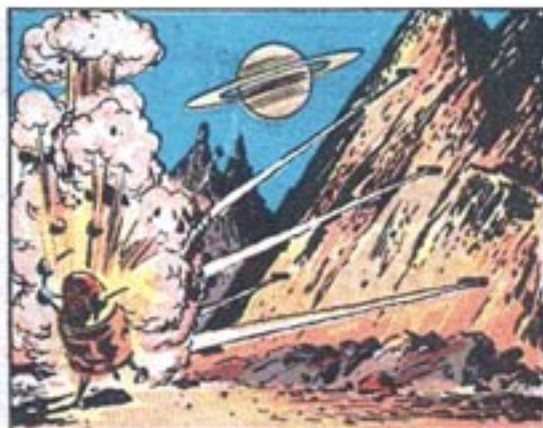
SKIMMING LOW OVER TITAN'S RUGGED SURFACE THE CUTTER THROWS DOWN A HEAVY SMOKE SCREEN WHICH HIDES THE DESCENT OF A LANDING PARTY.



BEFORE THE SMOKE SCREEN LIFTS, THE SPACE GUARD QUICKLY SET UP A STRANGE MACHINE NEAR WHERE THEY BELIEVE THE SPACE PIRATES ARE HIDING. THEN, USING THEIR SHOULDER ROCKETS, THE LANDING PARTY DISAPPEARS IN THE CLIFFS TO WATCH.



NOW, THE PIRATES IN THEIR SECRET LAIR, ARE BUZZING LIKE ANGRY HORNETS. THAT STRANGE MACHINE IS JAMMING THEIR INSTRUMENTS!



"DESTROY IT," SHOUTS THE PIRATE CHIEF, AND A BARRAGE OF DEADLY RAYS POURS FROM A NEARBY CLIFF. THIS IS JUST WHAT THE SPACE GUARDS WANT...THE PIRATES HAVE DISCLOSED THEIR HIDE-AWAY!



THE LANDING PARTY RADIOS THE LOCATION OF THE PIRATE'S BASE AND THE CUTTER ROARS OVER, DROPPING AN ATOM-THERMO BOMB IN A DIRECT HIT. NOW THE WAITING SPACE GUARDSMEN ROCKET INTO ACTION...



...ZOOMING TO THE NOW EXPOSED HIDE-OUT WITH THEIR RAY GUNS BLAZING. THE FIGHT IS FIERCE BUT SHORT...THE EXPOSED PIRATES ARE NO MATCH FOR THE GUARDSMEN!



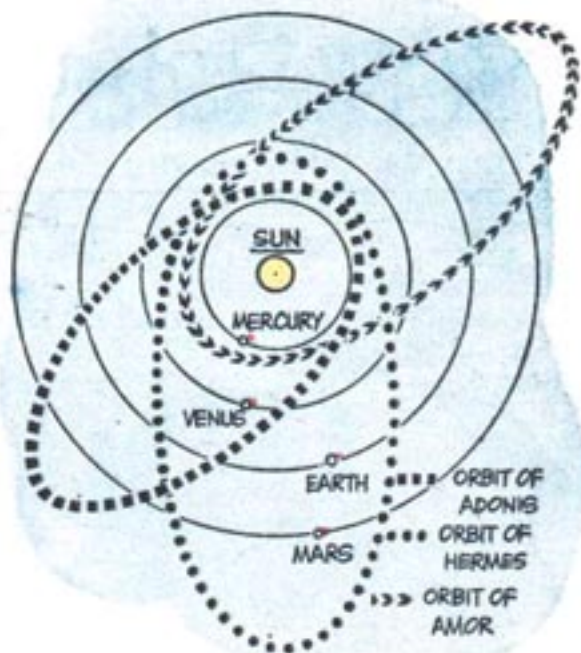
THE SPACE GUARD CUTTER LANDS ON TITAN'S FROZEN SURFACE AS SOON AS THE PIRATE'S LAIR HAS BEEN DESTROYED. ANOTHER TOUGH ASSIGNMENT "WELL-DONE" BY THE SPACE GUARD!

SPACE CONQUERORS!

By
Al Stenzel

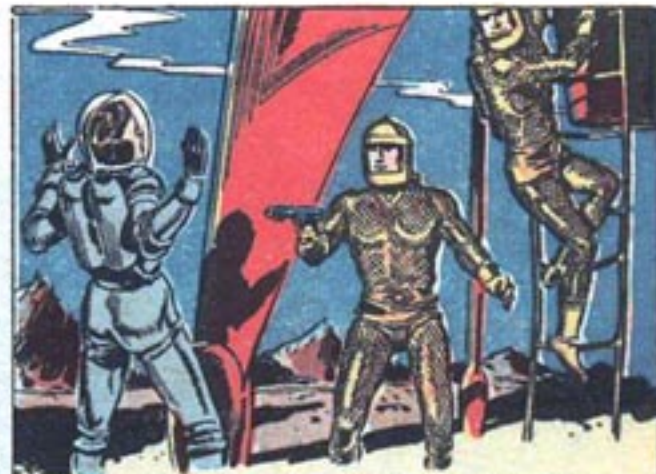
ON THREE PLANETOLDS WHOSE ORBITS PASS BETWEEN THE EARTH AND THE SUN THE INTER-PLANETARY DEPARTMENT OF CELESTIAL NAVIGATION HAD ESTABLISHED RADIO BEACON STATIONS TO GUIDE SPACE SHIPS ON THEIR PROPER COURSE.

FOR NEARLY A YEAR, HENRY FROST HAD LIVED ON HERMES, ONE OF THE THREE, AS KEEPER OF ITS POWERFUL BEACON WHOSE BEAM KEPT THE SWIFT SPACE SHIPS ON THEIR COURSE THROUGH THE VOID.

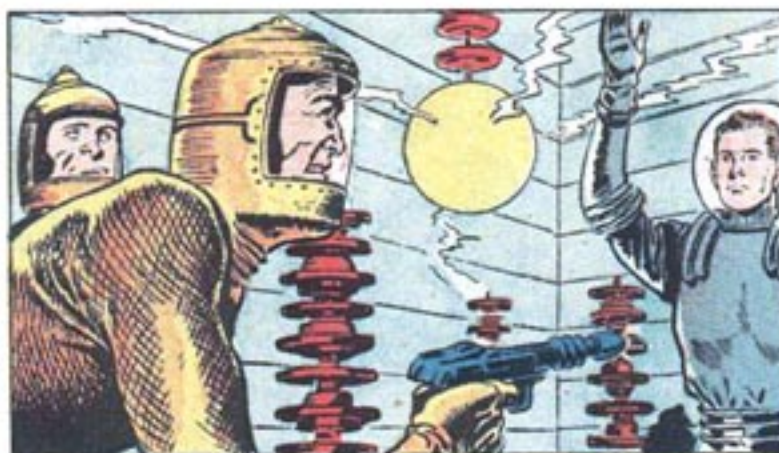


IT WAS A LONELY LIFE...MUCH THE SAME AS EARTH LIGHT-HOUSE KEEPERS LIVED EARLY IN THE 20TH CENTURY. SUDDENLY, HENRY FROST'S FACE LIGHTED WITH JOY! ON HIS RADAR A SHIP APPEARED COMING CLOSER AND CLOSER...HIS RELIEF MUST BE ARRIVING EARLY...

QUICKLY DONNING HIS SPACE-SUIT HE HURRIED OUTSIDE TO GREET THIS WELCOME BREAK IN HIS LONG, MONOTONOUS TOUR OF DUTY.



THE CUSHIONING BLASTS OF THE ROCKETS HAD HARDLY DIED WHEN TWO SPACE-SUITED FIGURES DESCENDED FROM THE SHIP, THEIR RAY GUNS EVILLY POINTED AT THE SHOCKED STATION KEEPER!



THIS TURN OF EVENTS WAS SO UNEXPECTED THAT BEFORE HENRY FROST COULD GATHER HIS WITS HE WAS FORCED TO LEAD THE WAY TO THE STATION'S HUGE POWER PLANT. INSIDE, ONE OF THE STRANGERS GROWLED, "SHOW US HOW TO DEFLECT THIS BEAM AND NO TRICKS!"

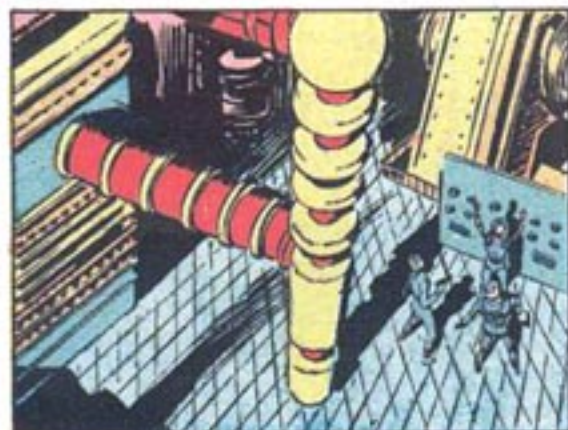
SUDDENLY IT WAS ALL CLEAR TO HENRY! THE GOLD-LADEN PAY SHIP HEADING FOR THE MARTIAN MINES WOULD SOON PASS THIS PLANETOID, DEPENDING ON HIS BEACON TO KEEP IT ON ITS PROPER COURSE.



THESE MEN INTENDED TO SEND IT HURLING TO ITS DOOM IN THE ASTEROID BELT, WHERE THEY COULD SALVAGE ITS GOLDEN TREASURE.



EVERYTHING HAD HAPPENED SO SWIFTLY THEY HADN'T REMOVED THEIR SPACE SUITS EVEN THOUGH THEY WERE NOW INDOORS. NOTING THAT THE ARMED STRANGERS WERE WEARING METAL-MESH SPACE SUITS WHEREAS HIS WAS OF SPECIAL RUBBER, A PLAN FORMED IN HENRY'S MIND...



"DEFLECTING THE BEAM ISN'T EASY," HE EXPLAINED, HOPING THEY WOULD BELIEVE HE WAS WILLING TO OBEY THEM, "I'LL HAVE TO SHUT OFF THE MAIN SWITCH." AS THE TWO MEN MOVED CLOSE TO THE MAIN POWER LINE TO WATCH HIM...

...HENRY'S HAND QUICKLY SPUN A DIAL WHICH SENT A TERRIFIC SURGE OF ELECTRICITY INTO THE LINES...IMMEDIATELY AN ENORMOUS SPARK LEAPED FROM THE INSULATORS TO THE METAL-CLAD FIGURES ENVELOPING THEM IN A SEARING BLUE FLAME.



BEFORE THE TWO COULD RECOVER FROM THE PARALYZING ELECTRIC SHOCK, HENRY RUSHED OUTSIDE AND DESTROYED THEIR SPACE SHIP. RETURNING, HE HELD THE TWO CAPTIVE UNTIL HIS RELIEF ARRIVED.

SPACE CONQUERORS!

by Al Stenzel

WORD OF RICH URANIUM DEPOSITS ON THE PLANET MARS HAS BEEN FLASHED TO EARTH! IMMEDIATELY THE RACE FOR POSSESSION OF THE VALUABLE FIELDS IS ON...



ON PHOBOS, THE NEAREST OF MARS' TWO MOONS, THE PROSPECTORS WHO HAD FIRST DISCOVERED THE URANIUM WATCH AS RIVAL SPACE SHIPS FLASH BY.



FRANTICALLY, SCIENTISTS FROM MANY NATIONS ON EARTH SEARCH THE SURFACE OF THE RED PLANET...BUT TO NO AVAIL...NO TRACE OF URANIUM CAN BE FOUND. THEN, ONE GROUP HITS UPON THE REASON...

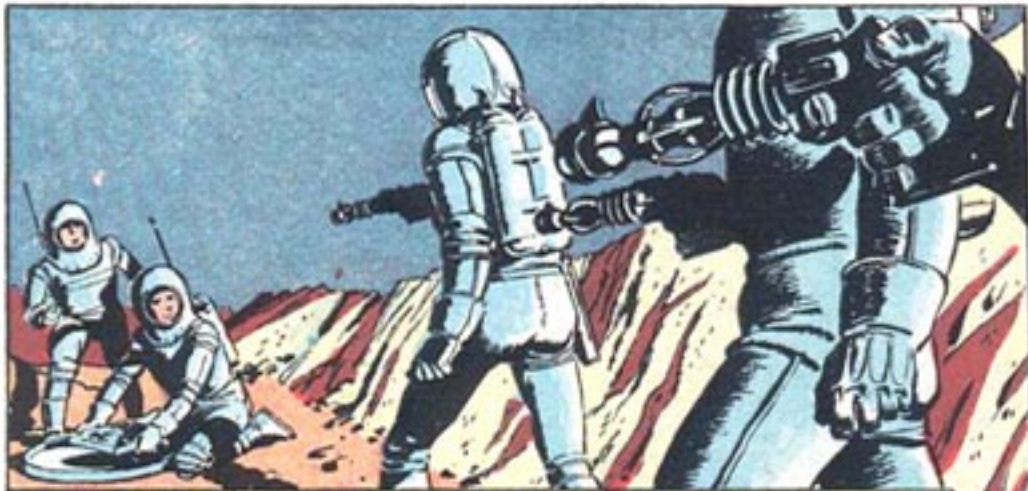


THEIR INSTRUMENTS REGISTER A HIGH CONCENTRATION OF ORE AND THEN DROP TO ZERO. "THE URANIUM IS ON PHOBOS, NOT HERE," EXCLAIMS ONE. "WE GO THERE," ORDERS THE COMMANDER.

TWO SMALL MOONS REVOLVE AROUND THE PLANET MARS, EACH ABOUT $\frac{1}{4}$ THE SIZE OF THE EARTH'S MOON.

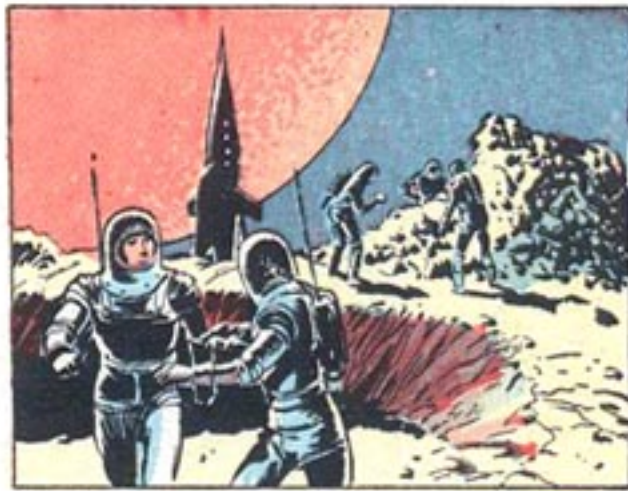


DEIMOS WOULD APPEAR JUST AS A BRIGHT STAR FROM THE SURFACE OF MARS. PHOBOS, HOWEVER, IS SO CLOSE THAT IT WOULD RISE EVERY 11 HOURS AND BE IN THE MARTIAN SKY FOR 4 HOURS AND 20 MINUTES EACH TIME!

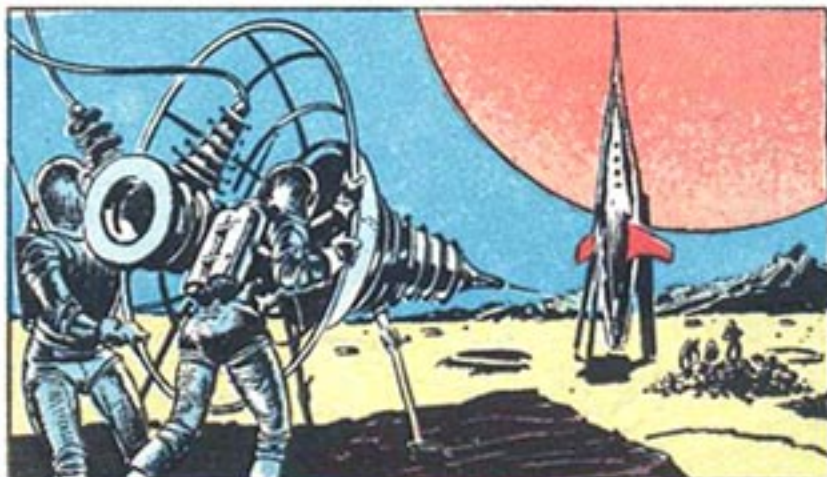


LANDING ON PHOBOS, THEY IGNORE THE PROTESTS OF THE TWO ORIGINAL DISCOVERERS. "WE RECOGNIZE NO PRIOR CLAIMS," THEY SNARLED, "GET OFF OR BE KILLED... AT ONCE!"... AND BACKED THEIR COMMAND WITH DRAWN RAY GUNS.

BUT, UNKNOWN TO THE CLAIM JUMPERS, THE TWO PROSPECTORS HAD ALSO FOUND A NEW ELEMENT ON PHOBOS... **THERMIUM!** WHICH THEY HAD TESTED AND FOUND TO BE STRANGELY UNSTABLE WHEN SUBJECTED TO CERTAIN ELECTRICAL IMPULSES.



AS THE TWO STARTED FOR THEIR SPACE SHIP THEY SAW THE ROBBER CREW EXAMINING A HUGE PILE OF ORE, WONDERING WHAT IT WAS...



REACHING THE SHIP, THEY QUICKLY SET UP AN ELECTRO-BEAM AMPLIFIER WIRED TO THEIR SHIP'S POWERFUL GENERATOR AND TRAINED IT ON THE ORE...
THE DANGEROUSLY UNSTABLE THERMIUM!



THE CAREFULLY ADJUSTED ELECTRICAL IMPULSE STRIKES THE EXPOSED PILE OF ORE!



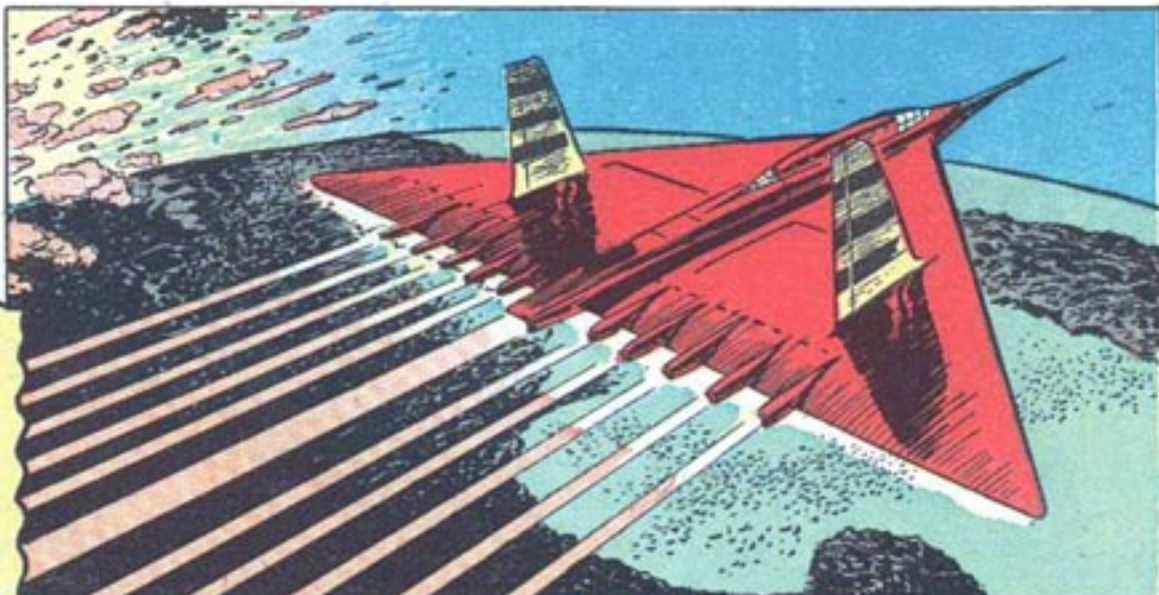
ATTRACTED BY THE TERRIBLE EXPLOSION, A SPACE PATROL CRUISER LANDS ON PHOBOS. AFTER EXAMINING ALL THE FACTS, THE TWO MEN ARE ACQUITTED OF ALL CHARGES AND THEIR CLAIM TO THEIR RICH FIND IS OFFICIALLY REGISTERED.

SPACE CONQUERORS!

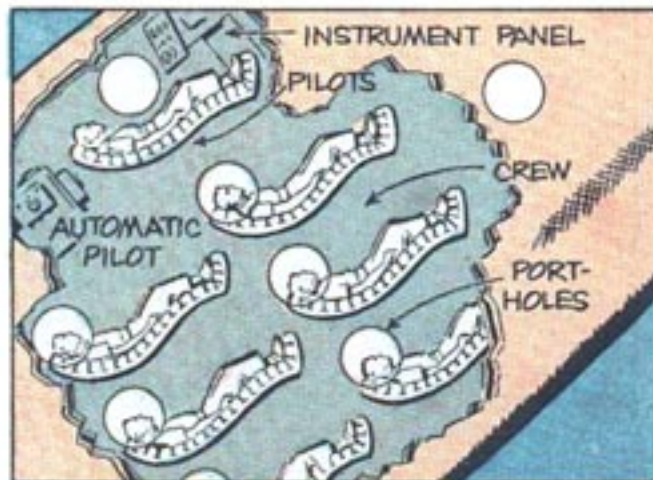
by AL STENZEL



THE FIRST STEP IN MAN'S CONQUEST OF SPACE WILL BE THE CONSTRUCTION OF A SPACE STATION REVOLVING AROUND THE EARTH ON A REGULAR, FIXED ORBIT.



FROM ITS HOME BASE ON EARTH A HUGE DELTA WING ROCKETS TOWARD THE PRE-DETERMINED LOCATION OF THE SPACE STATION.



TO PROTECT THE CREW FROM THE TERRIFIC ACCELERATION THEY ARE STRAPPED INTO CONTOUR COUCHES. AN AUTOMATIC PILOT IS IN CONTROL OF THE SHIP ALL DURING ITS TAKE-OFF.

WITHIN A FEW MINUTES THE SHIP HAS REACHED A VELOCITY OF 8000 FEET PER SECOND AND A HEIGHT OF 136 MILES!

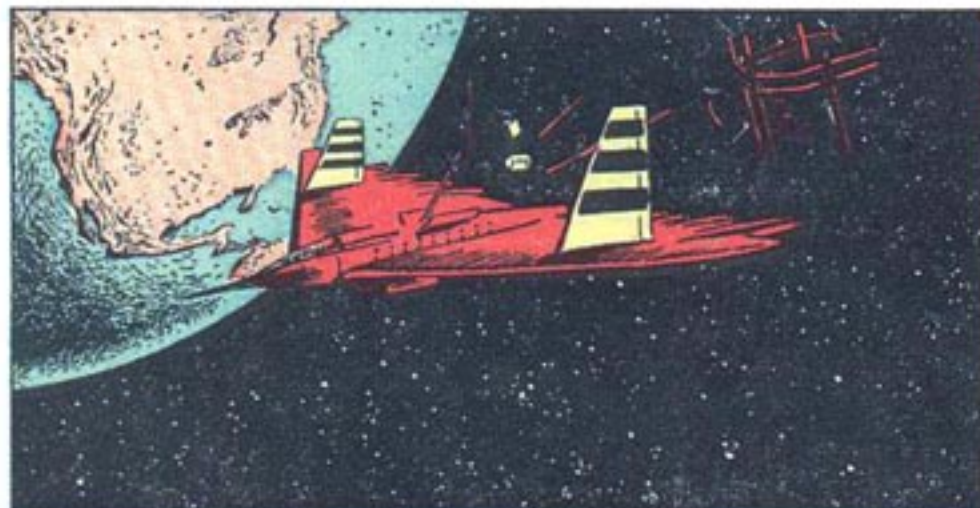


THEN, THE ROCKETS ARE AUTOMATICALLY SHUT OFF AND THE SHIP IS NOW IN FREE FLIGHT, COASTING TOWARD ITS TARGET IN SPACE... 2,500 MILES FROM EARTH!

HERE, ROCKET REACHES ORBITAL PATH



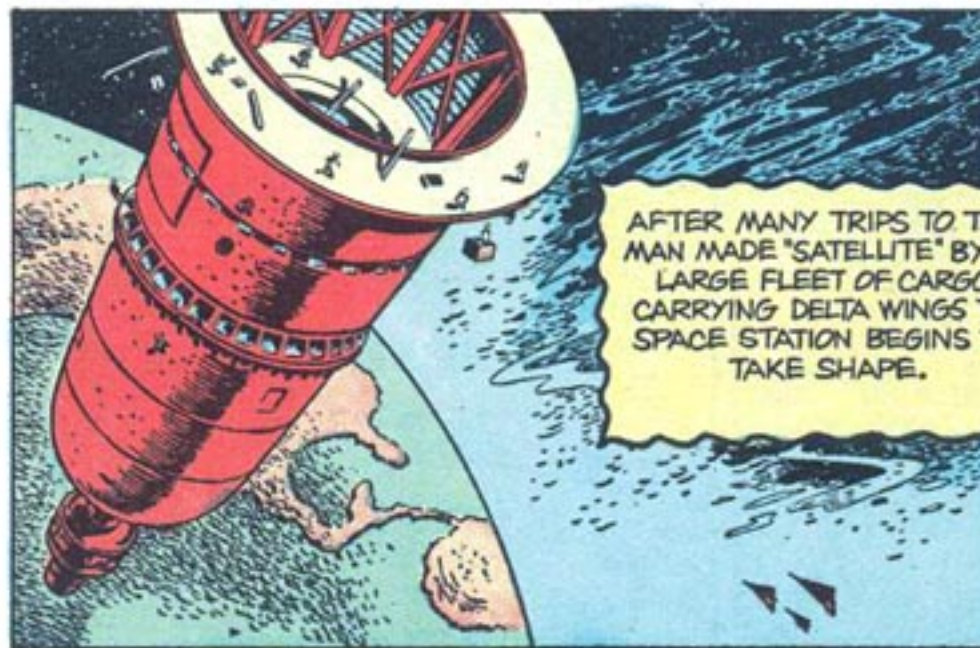
AT 2,500 MILES THE SHIP HAS BEEN SLOWED BY EARTH'S GRAVITATIONAL PULL, A SHORT SPURT ON THE ROCKETS SETS IT ON THE CORRECT ORBITAL SWING AROUND THE EARTH WHICH IT CAN NOW MAINTAIN WITH NO FURTHER USE OF POWER.



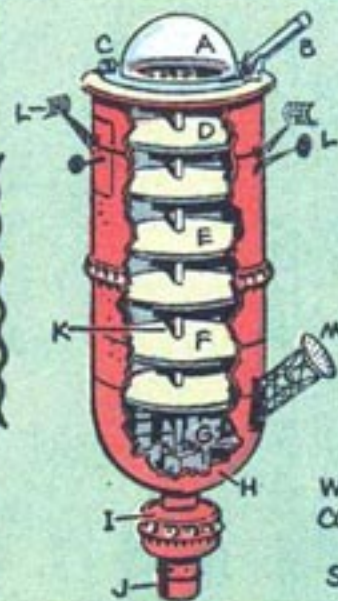
AT THIS POINT THE CREW IN THEIR SPACE SUITS BEGIN UNLOADING THE EQUIPMENT AND PRE-FABRICATED PARTS TO CONSTRUCT THE SPACE STATION.



BECAUSE THEIR SPEED AND THE EARTH'S GRAVITATIONAL PULL ARE NOW EQUALIZED EVERYTHING IS WEIGHTLESS AND THE HUGE PARTS ARE HANDLED WITH EASE.



AFTER MANY TRIPS TO THE MAN MADE "SATELLITE" BY A LARGE FLEET OF CARGO-CARRYING DELTA WINGS THE SPACE STATION BEGINS TO TAKE SHAPE.



- A. OBSERVATORY
- B. HIGH POWER TELESCOPE MOUNTED OUTSIDE ON REVOLVING TRACK
- C. COUNTER-WEIGHT
- D. LABORATORIES AND WORKING SPACE
- E. LOUNGE, DINING ROOM, KITCHEN AND RECREATION SPACE
- F. DORMITORIES
- G. FUEL AND STORAGE SPACE
- H. ENGINE ROOM
- I. AIR LOCK
- J. "TAXI" PORT
- K. ELEVATOR SHAFT
- L. AERIALS
- M. SOLAR MIRROR

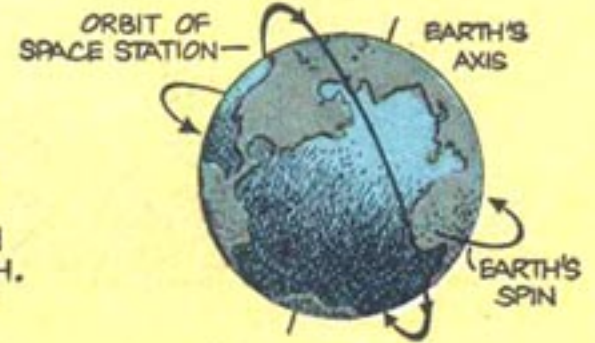
WITHIN TWO YEARS THE SPACE STATION IS COMPLETED AND READY TO BEGIN OPERATING AS AN ASTRONOMICAL OBSERVATORY AND STARTING POINT FOR FURTHER EXPLORATION OF SPACE!

SPACE CONQUERORS!

BY AL STENZEL



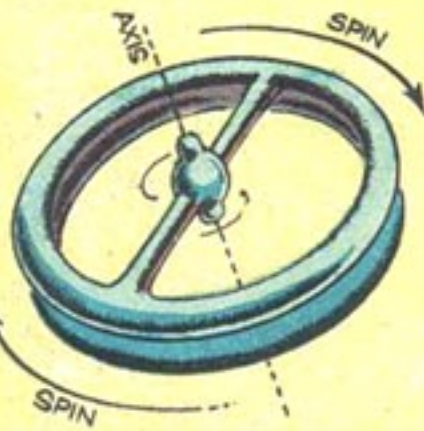
ASTRO-SCIENTISTS BELIEVE THAT BEFORE SPACE TRAVEL CAN BE A PRACTICAL REALITY A STATION MUST BE BUILT IN SPACE REVOLVING AROUND THE EARTH ON A FIXED ORBIT AT A VELOCITY THAT WILL EQUALIZE THE EARTH'S GRAVITATIONAL PULL. THIS WILL KEEP THE STATION CONSTANTLY AT ITS PROPER DISTANCE.



HOWEVER, TWO BIG PROBLEMS MUST BE SOLVED BEFORE WE WILL BE ABLE TO SEE A SPACE STATION FLOATING IN SPACE AROUND OUR EARTH.



1. HOW TO OVERCOME WEIGHTLESSNESS, THAT IS, GIVE THE SPACE STATION ITS OWN GRAVITATIONAL FIELD.
2. HOW TO KEEP THE STATION ON A FIXED ORBITAL PLANE (KEEP IT FROM FALLING BACK TO EARTH OR FLOATING OFF INTO SPACE).



IT HAS BEEN SUGGESTED THAT A SPACE STATION BUILT IN A "DOUGHNUT" SHAPE WOULD SOLVE THE GRAVITATIONAL PROBLEM. THE STATION WOULD SPIN ON ITS OWN AXIS, THUS CREATING SYNTHETIC GRAVITY BY CENTRIFUGAL FORCE (THE "PULL" REGULATED BY THE SPEED OF THE SPIN).

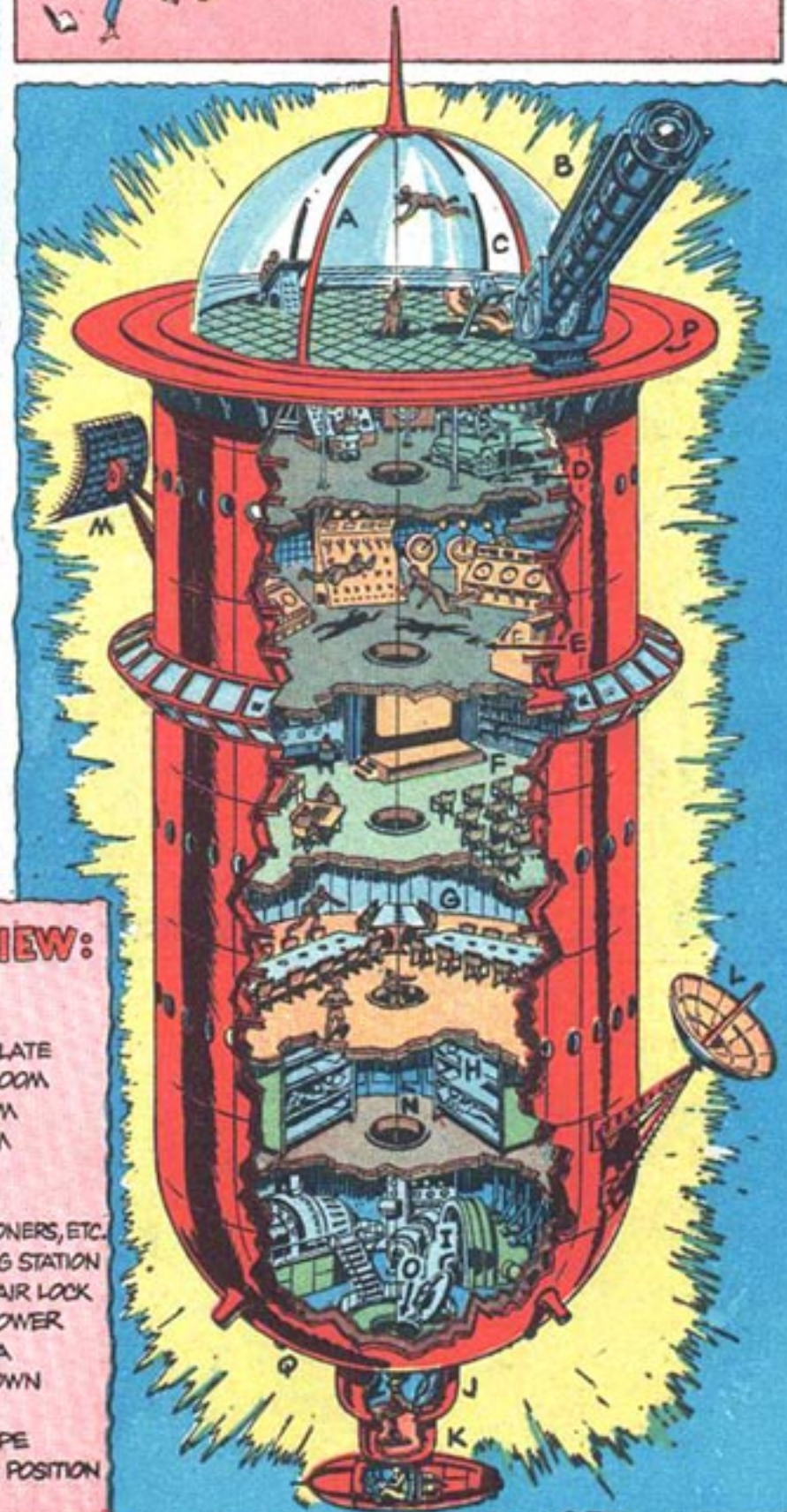
BUT, HOW COULD TELESCOPIC OBSERVATIONS BE MADE FROM THE RIM OF A WHEEL SPINNING AT THE RATE OF ABOUT ONE REVOLUTION EVERY TWENTY SECONDS?

OTHER AUTHORITIES BELIEVE THERE WILL BE NO NEED OF CREATING ARTIFICIAL GRAVITY ON THE SPACE STATION. ONCE THE CREW BECOME ACCUSTOMED TO THE ODD FEELING OF "WEIGHTLESSNESS" IT MIGHT BE MORE OF A CONVENIENCE THAN A HAZARD.

SINCE THERE IS NO AIR RESISTANCE IN SPACE THE SLIGHTEST PUSH WOULD START THE STATION DRIFTING. A SYSTEM OF ROCKET ENGINES WOULD BE NECESSARY TO AUTOMATICALLY RE-ADJUST ITS POSITION.

KEY TO SECTIONAL VIEW:

- A PLASTIC-DOMED OBSERVATORY
- B OUTSIDE 200 INCH TELESCOPE
- C ASTRONOMER AT ASTRO-IMAGE PLATE
- D TV, RADIO AND ASTRO-RADAR ROOM
- E SPACE STATION REGULATOR ROOM
- F LOUNGE AND RECREATION ROOM
- G GALLEY AND MESS HALL
- H SLEEPING QUARTERS
- I ENGINE ROOM, BLOWERS, AIR CONDITIONERS, ETC.
- J AIR LOCK FOR ENTERING AND LEAVING STATION
- K SPACE TAXI DISCHARGING CREW IN AIR LOCK
- L SOLAR MIRROR FOR HEAT AND POWER
- M RADAR, RADIO AND TV ANTENNA
- N LIFE LINE FOR GOING UP OR DOWN
- O ENTRANCE MAN HOLES
- P TRACK FOR REVOLVING TELESCOPE
- Q ROCKET ENGINES FOR CORRECTING POSITION

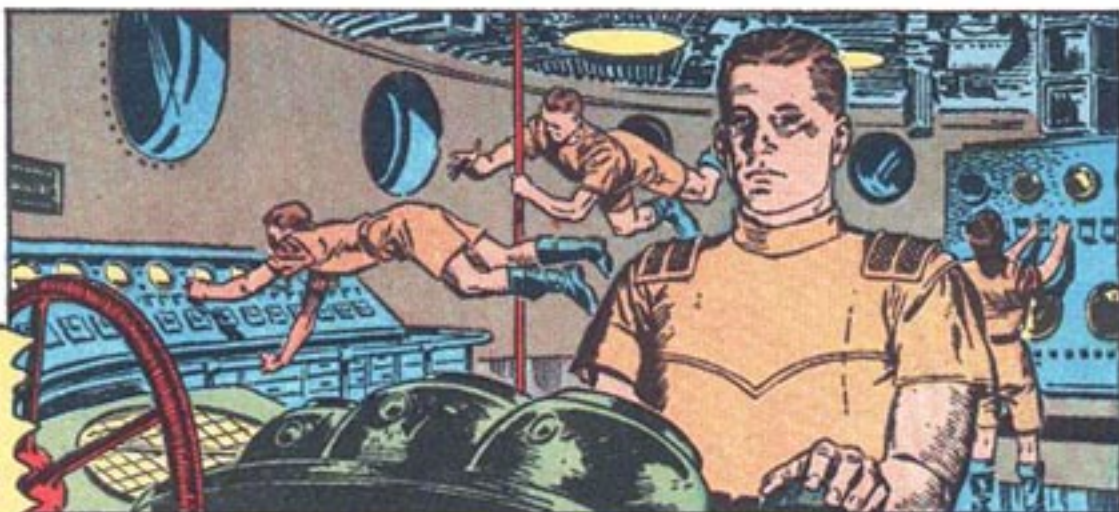


SPACE CONQUERORS!

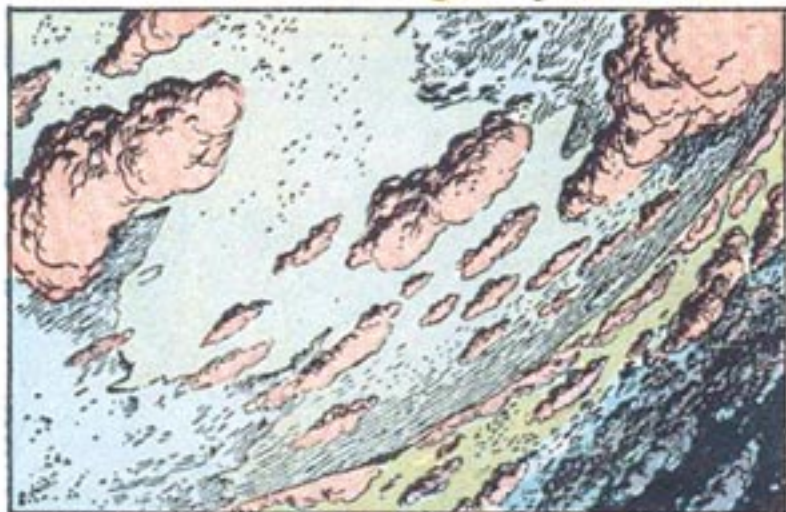


BY AL STENZEL

MAN'S FIRST SPACE STATION HAS AT LAST BEEN COMPLETED 2500 MILES OUT FROM THE EARTH'S SURFACE. REVOLVING AT A SPEED SUFFICIENT TO EQUALIZE EARTH'S GRAVITATIONAL PULL THE STATION KEEPS ON ITS ORBIT MAKING A COMPLETE JOURNEY AROUND THE EARTH ONCE EVERY THREE HOURS!



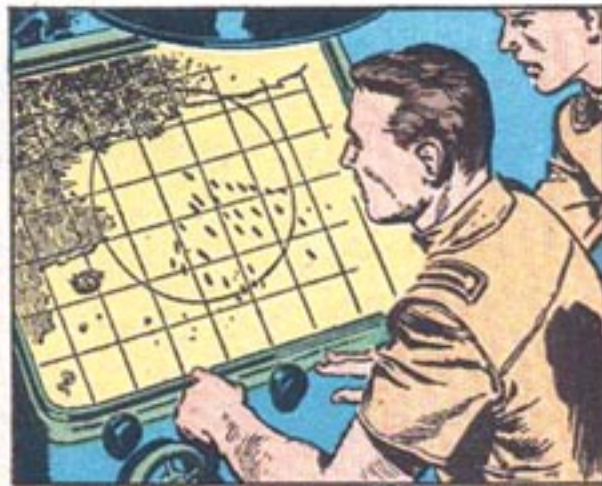
NOW, THE MANY EARTH SCIENTISTS ON BOARD SCAN THEIR INSTRUMENTS HOPING TO UNLOCK TERRESTRIAL AND STELLAR SECRETS WHICH HAVE BAFLED EARTHMEN SINCE THE BEGINNING OF TIME.



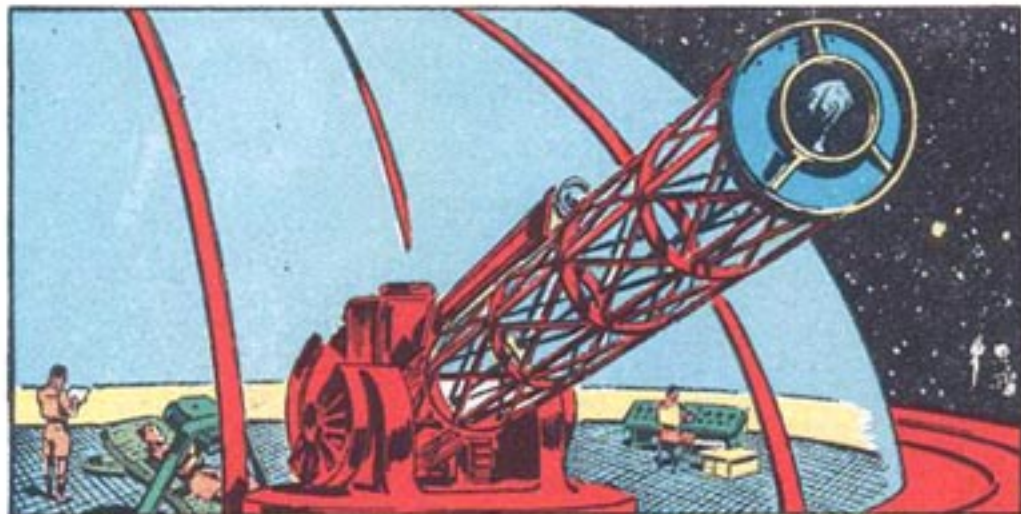
DELICATE METEOROLOGICAL INSTRUMENTS DETECT AND TRACK ATMOSPHERIC DISTURBANCES WHICH WILL AFFECT WEATHER CONDITIONS ON EARTH...



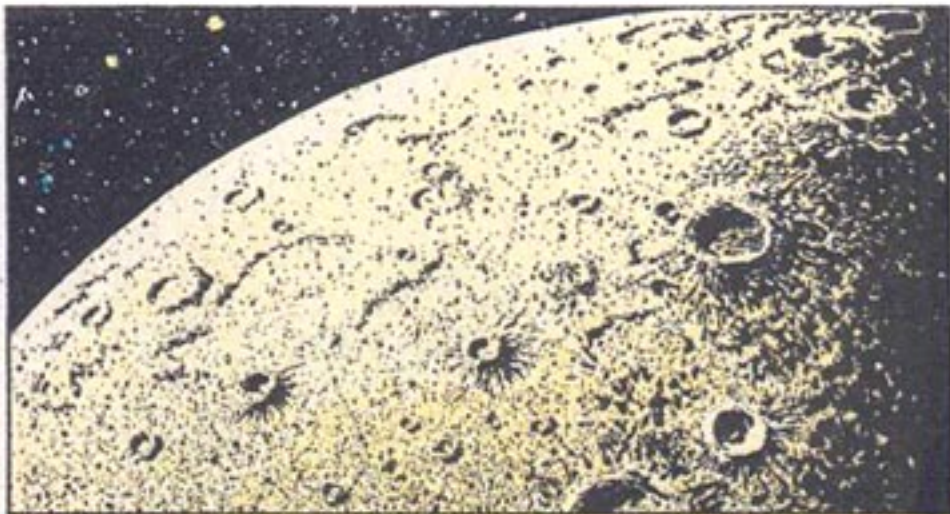
SUN SPOTS AND THEIR RELATIONSHIP TO EARTH'S WEATHER ARE STUDIED AND CHARTED...LONG RANGE WEATHER FORECASTING IS AT LAST A SUCCESSFUL REALITY!



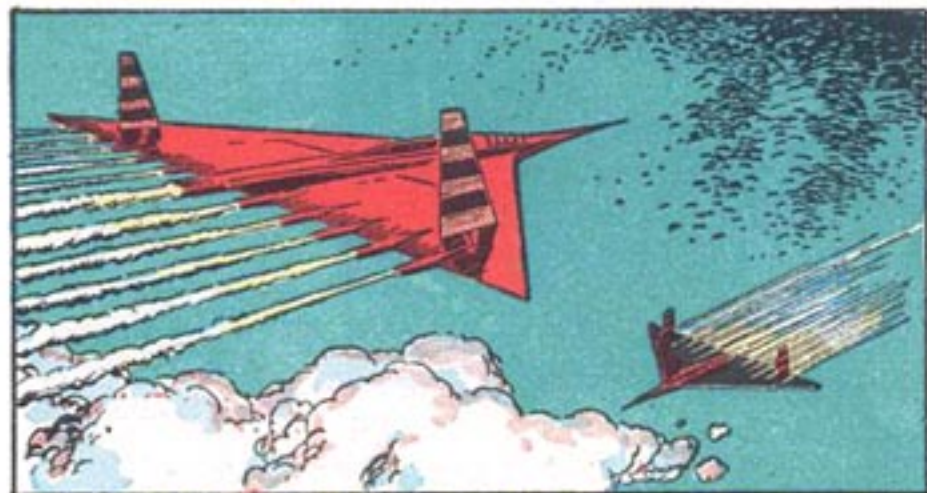
SNEAK ATTACKS BY ONE NATION UPON ANOTHER ARE NO LONGER POSSIBLE. ANY CONCENTRATION OF ARMED FORCES WOULD IMMEDIATELY BE DISCOVERED BY THE WATCHERS IN SPACE!



BECAUSE THERE IS NO ATMOSPHERE, CLOUDS OR DUST TO INTERFERE WITH THEIR OBSERVATIONS, THE ASTRO-SCIENTISTS ARE ABLE TO PHOTOGRAPH THE HEAVENLY BODIES WITH EXCEPTIONAL CLARITY.



NEW CONSTELLATIONS ARE DISCOVERED...SURFACE DETAILS OF NEAR-BY PLANETS WHICH ARE HIDDEN FROM EARTH ASTRONOMERS ARE NOW REVEALED TO THE OBSERVERS ON THE SPACE STATION.



FAST, DELTA-WING ROCKET SHIPS SHUTTLE BACK AND FORTH FROM SPACE STATION TO EARTH WITH SUPPLIES, RELIEF CREWS...AND ...THE MATERIALS FOR THE CONSTRUCTION OF A SPACE SHIP TO EXPLORE THE MOON!

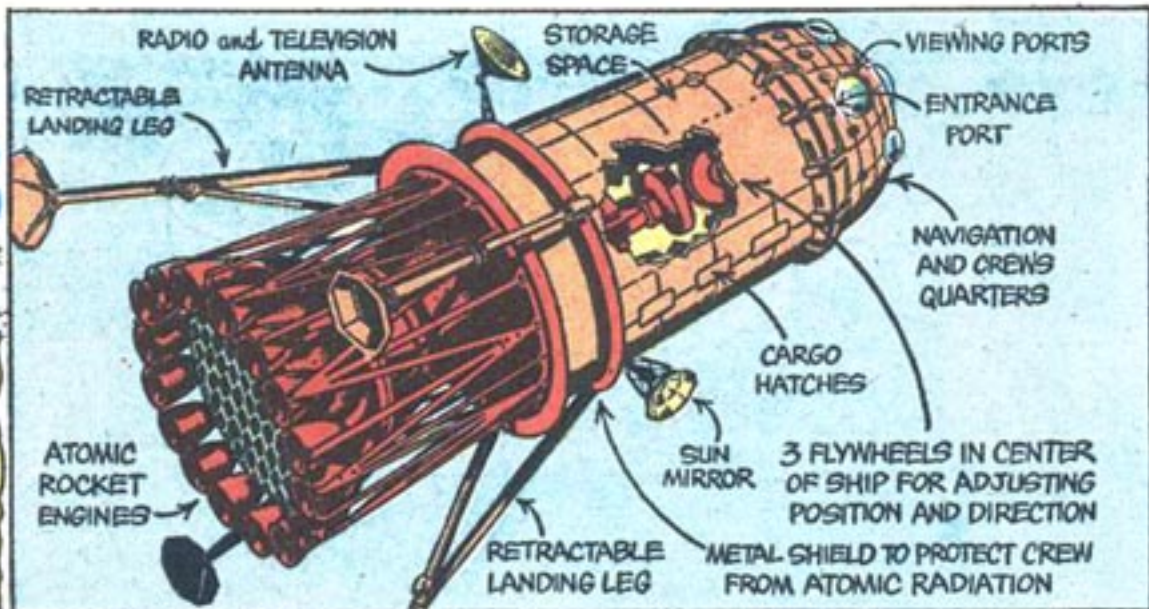


A SPACE SHIP STARTING ON ITS LONG VOYAGE TO THE MOON WILL NOT EXPEND MOST OF ITS FUEL OVERCOMING EARTH'S PULL WHEN LAUNCHED IN SPACE! SO THE WORK OF BUILDING THE SHIP NEAR THE SPACE STATION BEGINS AS SPACE-SUITED WORKMEN ASSEMBLE THE PREFABRICATED PARTS.

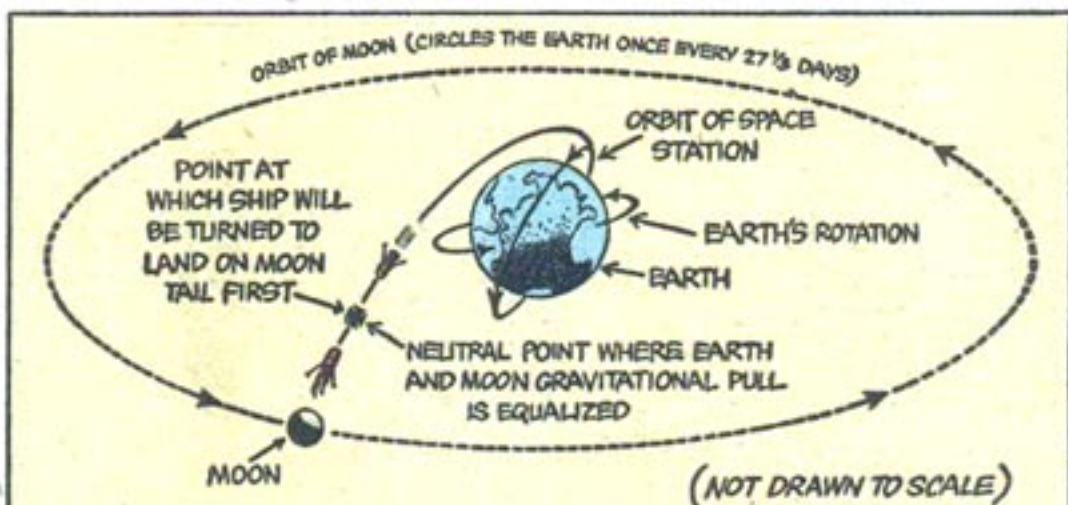
SPACE CONQUERORS!

BY AL STENZEL

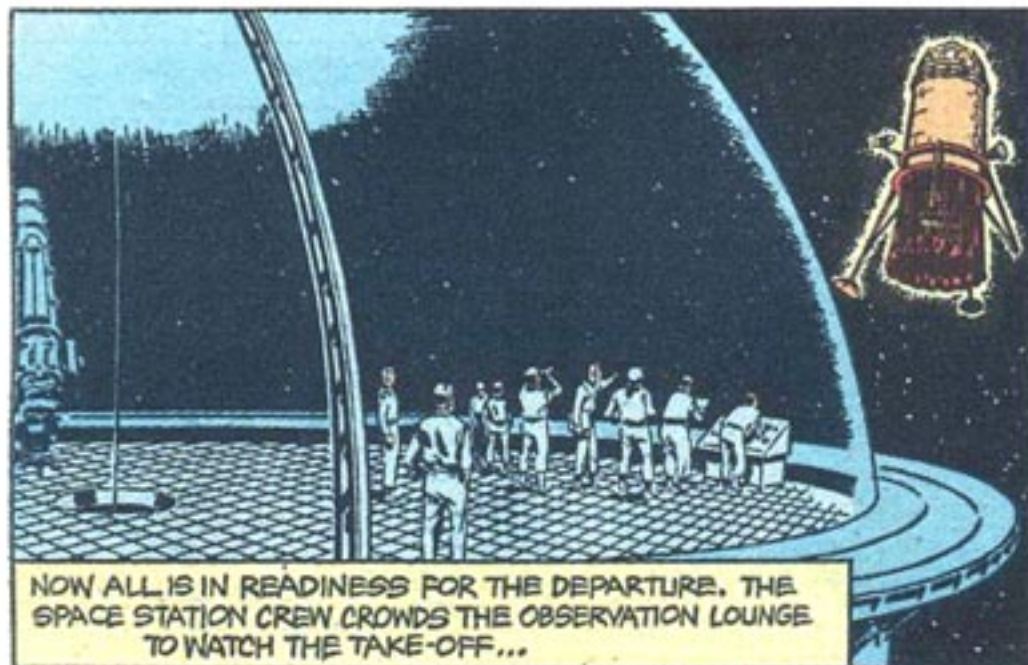
NEAR THE SPACE STATION REVOLVING AROUND THE EARTH 2500 MILES DISTANT, AN ODD-LOOKING CRAFT IS ALMOST COMPLETED. ITS PRE-FABRICATED PARTS WERE FLOWN THERE BY SWIFT DELTA-WING ROCKET SHIPS FROM THE HOME BASE.



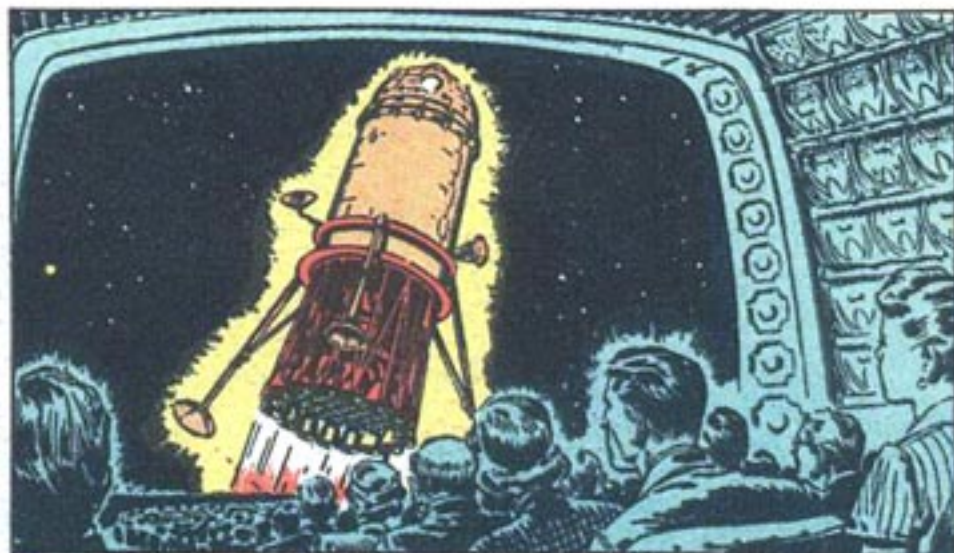
AS THE STRANGE CRAFT NEARED COMPLETION, THE FOUR MEN CHOSEN TO MAKE THIS FIRST ATTEMPT TO REACH THE MOON, ASSEMBLED IN THE QUARTERS ASSIGNED TO THEM.



THEY CAREFULLY REVIEWED THE COURSE THEY HAD PLOTTED WHICH WOULD INTERCEPT THE MOON BY THE SHORTEST, MOST PRACTICAL ROUTE.



NOW ALL IS IN READINESS FOR THE DEPARTURE. THE SPACE STATION CREW CROWDS THE OBSERVATION LOUNGE TO WATCH THE TAKE-OFF...



MILLIONS OF PEOPLE ON EARTH WATCH THE EXCITING SCENE ON TELEVISION IN THEIR HOMES AND ON GIANT SCREENS IN MOVIE THEATERS.



THE ATOMIC ROCKETS ARE FIRED. SLOWLY AT FIRST THE SHIP BEGINS TO MOVE...ORANGE FLAMES SPURT FROM THE ROCKET TUBES...GRADUALLY THE SPEED INCREASES...

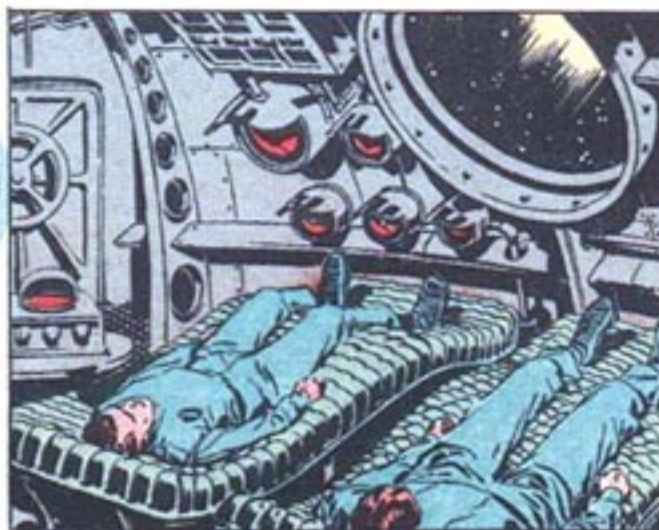


SOON THE SHIP IS BUT A STREAK OF LIGHT IN THE BLACKNESS OF OUTER SPACE. IF ALL GOES WELL AND THE COURSE IS RIGHT, IN FIVE DAYS IT SHOULD LAND ON THE MOON!

SPACE CONQUERORS!

By
AL STENZEL

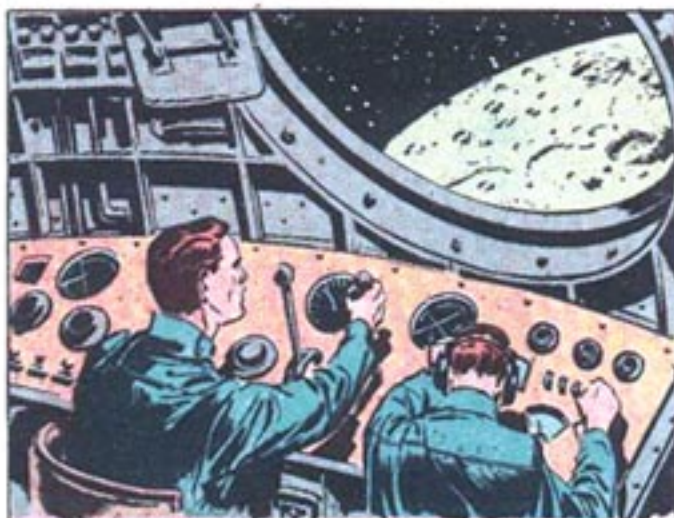
THE FIRST EXPEDITION TO THE MOON HAS LEFT THE SPACE STATION AND IS SPEEDING THROUGH THE VOID TO ITS TARGET AT NEARLY 20,000 MILES PER HOUR ON FULL ATOMIC ROCKET POWER.



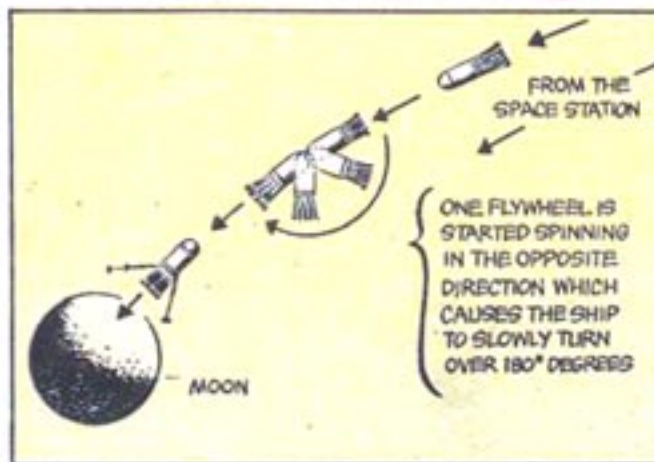
AFTER TWO HOURS OF FULL ROCKET POWER THE AUTOMATIC PILOT CUTS IT OFF AND THE SHIP COASTS TOWARD THE MOON



GRADUALLY THE SPEED SLOWS DOWN AND THE CREW, RELEASED FROM THE TERRIFIC FORWARD PRESSURE, CAN AGAIN MOVE ABOUT FREELY IN THEIR CRAMPED QUARTERS.



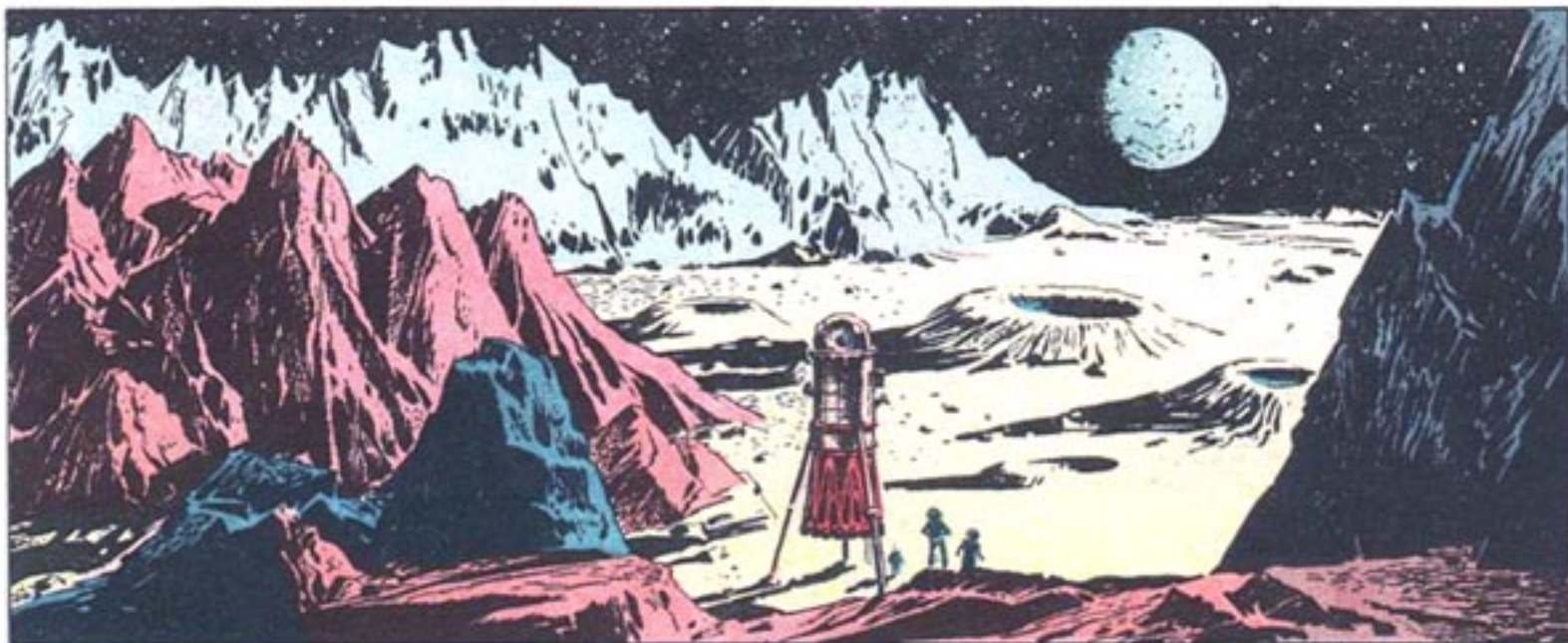
THREE DAYS MORE AND THE SURFACE OF THE MOON LOOMS AHEAD NEARLY FILLING THEIR ENTIRE HORIZON...NOW...



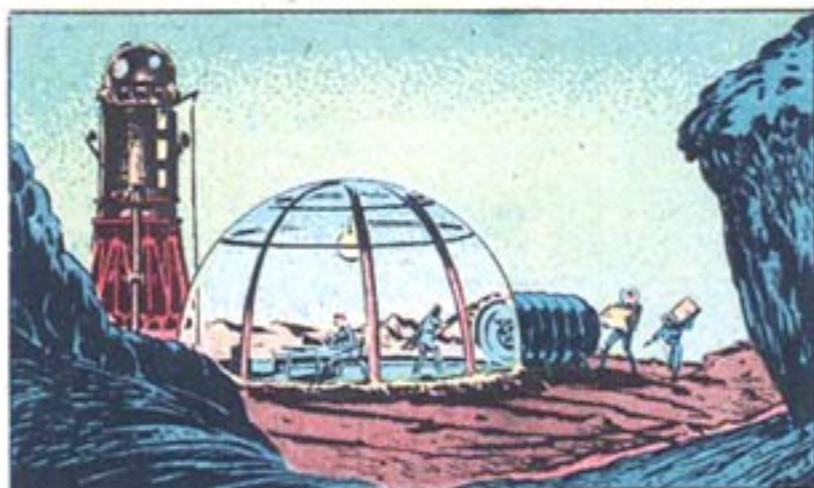
THEY SET THE POSITIONING FLYWHEELS IN MOTION AND THE SHIP MAKES A COMPLETE "TUMBLE." NOW IT IS FALLING TOWARD THE MOON'S SURFACE, ROCKET-TUBES DOWN.



AND ON A CUSHION OF ROCKET BLASTS THE SHIP SLOWLY SINKS TO THE MOON'S ROUGH CRATER-PITTED SURFACE



THE SHIP HAS LANDED ON THE EDGE OF "MARE NUBILUM." FAR ACROSS THIS CRATER-PITTED PLAIN CAN BE SEEN THE "LEIBNITZ" MOUNTAINS. A GIGANTIC RANGE WHICH REACHES 30,000 FEET INTO THE LUNAR SKY. IN THE MIDDLE DISTANCE CAN BE SEEN THE GREAT CRATER "CLAVIUS"...150 MILES FROM RIM TO RIM! TO THE RIGHT, BUT HIDDEN BY A LARGE ROCK FORMATION IS THE CRATER "TYCHO." BOTH OF THESE CRATERS CAN BE SEEN FROM EARTH WITH JUST A SMALL TELESCOPE.



DONNING THEIR SPACE SUITS THE ADVENTUROUS CREW DESCEND TO THE MOON'S DUSTY SURFACE. THEY FIRST SET UP A PRESSURIZED HUT TO SERVE AS A BASE FOR THEIR SUPPLIES AND EQUIPMENT.

DURING THE MOON'S DAY (336 HOURS LONG) THE TEMPERATURE REACHES 212 DEGREES F...DURING THE NIGHT OF 336 HOURS THE TEMPERATURE DROPS TO 250 DEGREES BELOW ZERO F... A TOTAL DAILY RANGE OF OVER 400 DEGREES!

THE GRAVITATIONAL PULL ON THE MOON IS ONE-SIXTH THAT ON EARTH, SO THE SPACE SHIP'S CREW MUST WALK CAREFULLY UNTIL THEY BECOME USED TO THIS STRANGE FEELING OF "LIGHTNESS!"



SINCE THE MOON ALWAYS KEEPS THE SAME FACE TURNED TOWARD THE EARTH MAN HAS NEVER OBSERVED ITS OTHER SIDE. NOW, FOR THE FIRST TIME, THAT UNKNOWN SIDE WILL BE EXPLORED AND MAPPED.

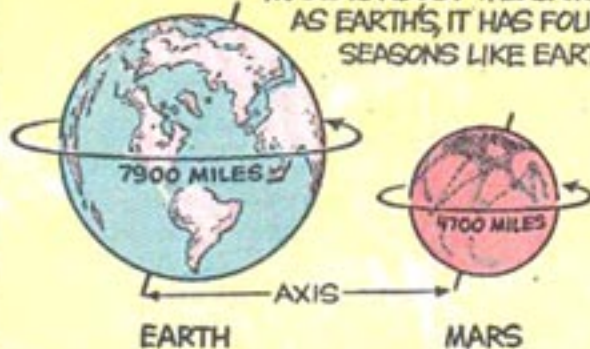
SPACE CONQUERORS!



BY AL STENZEL

THIS SUMMER THE PLANET MARS WILL SWING CLOSER TO EARTH THAN AT ANY TIME SINCE 1941.... 40,000,000 MILES... (BUT NOT AS CLOSE AS IT WILL IN 1956... 35,000,000 MILES).

BECAUSE THE AXIAL TILT OF MARS IS ABOUT THE SAME AS EARTH'S, IT HAS FOUR SEASONS LIKE EARTH.



ALTHOUGH NO MEASURABLE AMOUNT OF OXYGEN HAS YET BEEN DETECTED ON MARS MOST SCIENTISTS BELIEVE THERE MUST BE SOME. WE DO KNOW ITS ATMOSPHERE CONTAINS CARBON DIOXIDE AND A SMALL AMOUNT OF WATER VAPOR.



MARS' ORBIT AROUND THE SUN IS MUCH MORE ELLIPTICAL THAN EARTH'S. IT TAKES TWO EARTH YEARS FOR MARS TO REVOLVE ONCE AROUND THE SUN.



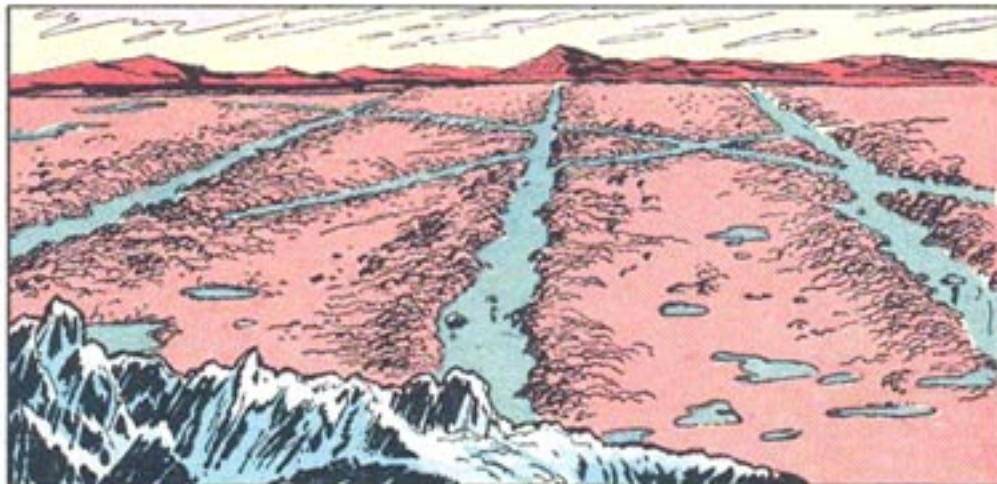
IN 1877 ASAPH HALL DISCOVERED THAT MARS HAD TWO TINY MOONS. PHOBOS, THE NEARER ONE ABOUT 3,700 MILES DISTANT, AND DEIMOS, ABOUT 12,500 MILES DISTANT. EACH ARE ONLY 10 TO 20 MILES IN DIAMETER.



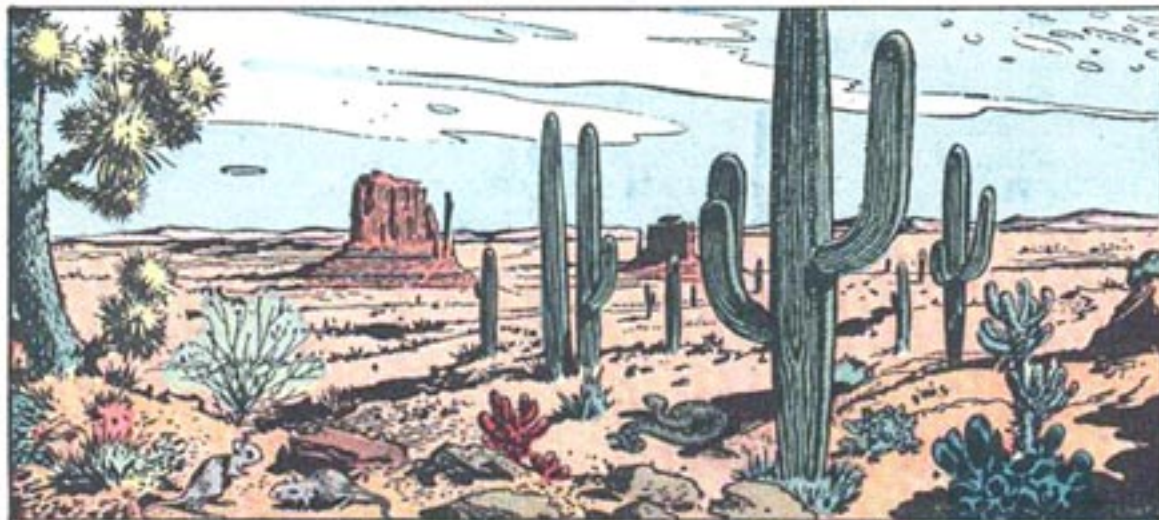
AT ABOUT THE SAME TIME GIOVANNI SCHIAPARELLI SAW FOR THE FIRST TIME LINES ON THE PLANET WHICH HE CALLED "CANALS." HE WAS SURE THE DARK AREAS WERE SEAS AND THE LIGHT AREAS CONTINENTS. SINCE THEN OTHER ASTRONOMERS HAVE SEEN THESE MARKINGS, AMONG THEM, DR. PERCIVAL LOWELL OF THE LOWELL OBSERVATORY.



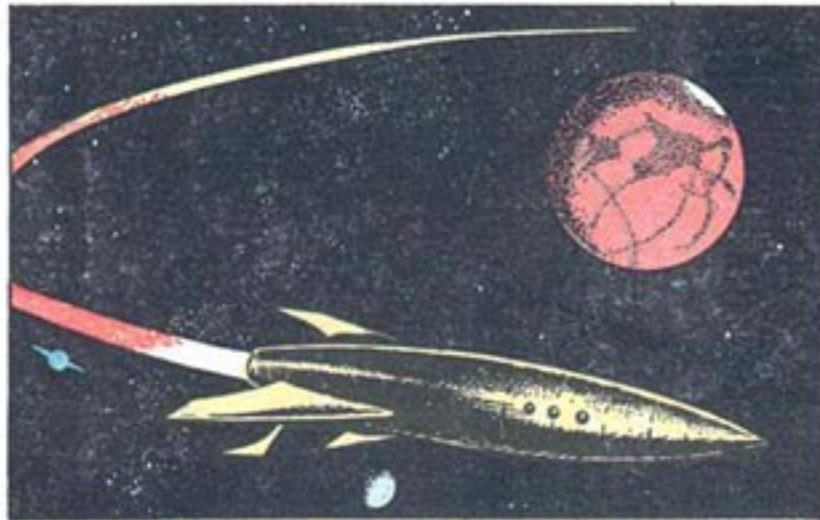
HOWEVER, THESE SO CALLED CANALS HAVE NOT BEEN SEEN BY ALL OBSERVERS. MANY ASTRONOMERS TODAY DO NOT BELIEVE IN THE EXISTENCE OF THESE CANALS AT ALL. PERHAPS WE'LL SOON KNOW.



WE DO KNOW THAT MARS' POLAR CAPS INCREASE IN SIZE DURING ITS WINTERS AND MELT DURING ITS SPRINGS WHEN STRANGE BLUE-GREEN AREAS DEVELOP, COVERING GREAT AREAS OF THE PLANET. THEY TURN A DRY-BROWN COLOR DURING THE SUMMER.



IF THERE IS LIFE ON MARS IT MUST NECESSARILY BE HARDY. YET VARIOUS FORMS OF LIFE EXIST ON EARTH UNDER CONDITIONS NO LESS SEVERE. FOR EXAMPLE, MANY PLANTS AND ANIMALS SURVIVE IN OUR AMERICAN DESERTS.



SOME DAY, IN THE NOT-TOO-DISTANT-FUTURE, SWIFT ROCKET SHIPS MAY CONQUER SPACE ENABLING MAN TO DISCOVER MARS' SECRETS.

SPACE CONQUERORS!

BY AL STENZEL

IT IS NOVEMBER, 2054. DR. COSMOS, AN ASTROPHYSICIST, MAKES A STARTLING ANNOUNCEMENT TO A GROUP OF SCIENTISTS AT THE LUNAR OBSERVATORY ON EARTH'S SATELLITE, THE MOON....

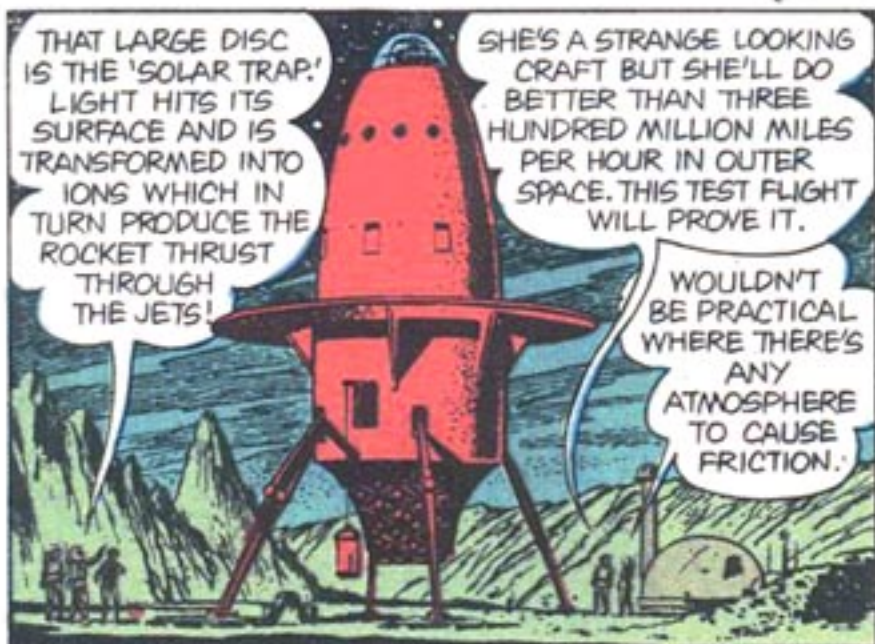


THE SPACESHIP WE HAVE JUST COMPLETED HERE IN OUR LUNAR PLANT WILL BE PROPELLED BY LIGHT RAYS THAT EJECT A POWERFUL STREAM OF CHARGED PARTICLES OR IONS WHICH WILL PRODUCE A THRUST EQUAL TO ONE HALF THE SPEED OF LIGHT!



A HUNDRED YEARS AGO THE FIRST FEEBLE SOLAR BATTERY WAS DISCOVERED!

AND NOW WE CAN PRODUCE NUCLEAR ENERGY BY THAT SAME PRINCIPLE!



THAT LARGE DISC IS THE 'SOLAR TRAP.' LIGHT HITS ITS SURFACE AND IS TRANSFORMED INTO IONS WHICH IN TURN PRODUCE THE ROCKET THRUST THROUGH THE JETS!

SHE'S A STRANGE LOOKING CRAFT BUT SHE'LL DO BETTER THAN THREE HUNDRED MILLION MILES PER HOUR IN OUTER SPACE. THIS TEST FLIGHT WILL PROVE IT.

WOULDN'T BE PRACTICAL WHERE THERE'S ANY ATMOSPHERE TO CAUSE FRICTION.

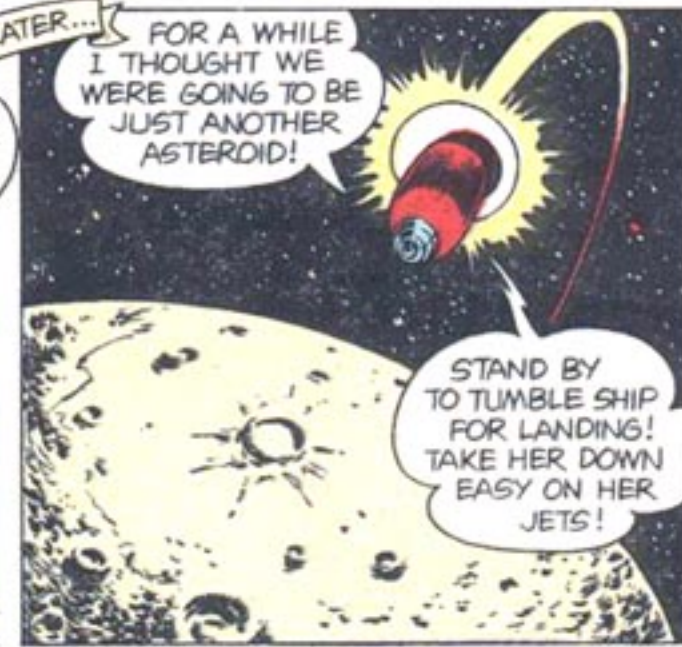


WHAT A TAKE-OFF! LUCKILY THE MAGNETIC GRAVITY FIELD WORKED OR WE'D ALL HAVE BEEN CRUSHED TO A PULP!

WE CAN'T USE FULL POWER ON THIS TRIAL RUN OR WE'D SHOOT OUT OF OUR GALAXY WITHIN A FEW HOURS!



FRANTICALLY DR. COSMOS AND THE CHIEF ENGINEER SEARCH FOR THE TROUBLE. EVERY MINUTE THE SHIP PLUNGES THOUSANDS OF MILES OFF COURSE...



SPACE CONQUERORS!

BY AL STENZEL

TAKING OFF FROM THE MOON'S INTER-STELLAR BASE, DR. COSMOS AND HIS CREW ZOOM TOWARD THE VAST REACHES OF OUTER SPACE IN THEIR NEW SOLAR-POWERED SPACESHIP. DESTINATION: ALPHA CENTAURI!



SO YOU THINK THERE ARE PLANETS REVOLVING AROUND THE SUN, ALPHA CENTAURI, DR. COSMOS?

THERE MUST BE! WHEN STARS ARE FORMED THERE IS SURE TO BE DEBRIS LEFT WHICH WOULD CONDENSE INTO PLANETS.

IF WE SURVIVE THIS LONG JOURNEY WE'LL FIND OUT!



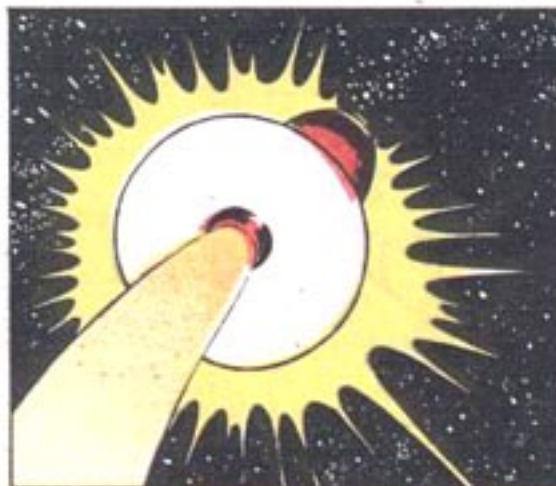
RIGHT! ALTHOUGH THIS SHIP IS CAPABLE OF HALF THE SPEED OF LIGHT IT WILL TAKE US EIGHT YEARS TO REACH OUR DESTINATION!

AS SOON AS WE ARE OUT OF OUR SOLAR SYSTEM WE'LL SET HER ON AUTOMATIC PILOT AND OPEN HER FULL THROTTLE!

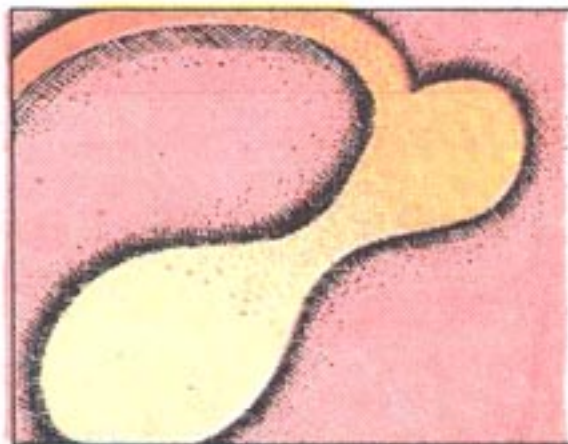


A TWENTY-YEAR ROUND TRIP! IF IT WASN'T FOR THIS NEW SOLAR POWER MEN WOULD NEVER BE ABLE TO GET FURTHER THAN JUPITER!

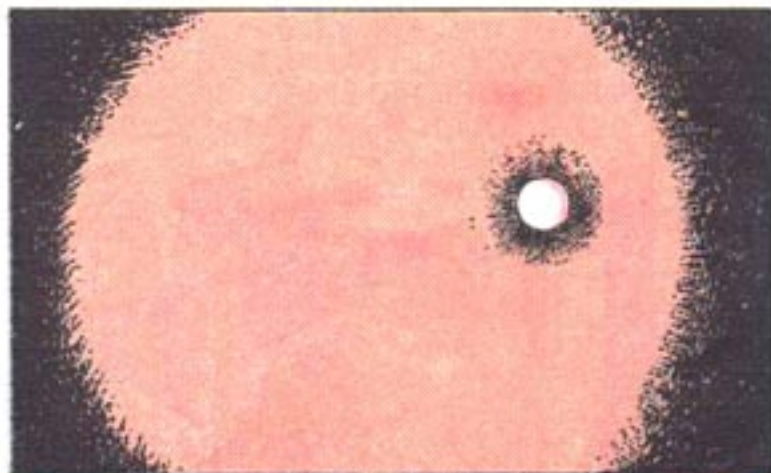
WELL, WE HAVE A GOOD CREW, A GOOD SHIP, PLENTY OF SUPPLIES AND THE EXCITEMENT OF PIONEERING INTO THE UNKNOWN!



DAY AFTER DAY THE SHIP SPED ONWARD AT TERRIFIC SPEED INTO THE BLACKNESS OF OUTER SPACE. ITS POWERFUL TELESCOPIC CAMERA WAS CONSTANTLY TAKING PHOTOS OF THE VARIOUS STAR TYPES IN THE GALAXY!



ONE OF THE MOST EXCITING WAS A SHOT OF A DOUBLE STAR OF THE BETA LYRAE TYPE. THE TWO STARS ARE SO CLOSE TOGETHER THEIR GRAVITATIONAL FIELDS DISTORT THEM INTO ELLIPSES LINKED BY A BRIDGE OF INCANDESCENT HYDROGEN.



ANOTHER WAS A PICTURE OF THE DOUBLE STAR, MIRA, A SO-CALLED "RED GIANT" AND ITS COMPANION, A WHITE "DWARF" STAR. MIRA IS SO TENUOUS IT DOES NOT SHOW A DEFINITE EDGE. THE OTHER STAR CAN BE SEEN SHINING THROUGH ITS RED MIST.



AS THE MONTHS GO BY STILL OTHER WEIRD STAR FORMATIONS ARE SEEN. THEY GET AN EXCELLENT SHOT OF A CLUSTER OF SIX SUNS OF VARIOUS COLORS REVOLVING AROUND EACH OTHER.

SUDDENLY, THROUGHOUT THE SHIP, ALARM BELLS AROUSE THE CREW TO ACTION...

METEOR SWARM APPROACHING, TEN O'CLOCK! MAN ALL EMERGENCY STATIONS! WE'LL TRY TO DODGE 'EM!



ONE GOT THROUGH OUR SCREEN! REPAIR CREW TO SECTION G-4-- ON THE DOUBLE!



QUICKLY THE REPAIR CREW DON THEIR SPACE SUITS AND CLAMBER OUT OF AN AIR-LOCK WITH THEIR EQUIPMENT. THEY WELD A PLATE OVER THE JAGGED HOLE IN THE PROTECTIVE OUTER HULL...



THAT OUTER HULL IS GOOD AND TOUGH! IF THAT ROCK HAD GONE THROUGH THE MAIN HULL WE'D BE GONE SPACE JOCKEYS!

YOU'VE GOT TO HAND IT TO DR. COSMOS, HE DODGED ALL BUT THAT SMALL ONE!

CHEER UP...ONLY SEVEN MORE YEARS AND WE'LL REACH ALPHA CENTAURI!

SPACE CONQUERORS!

BY AL STENZEL

CRUX
(SOUTHERN
CROSS)

CENTAURUS

BETA
PROXIMA

ALPHA

YEAR AFTER YEAR DR. COSMOS AND HIS CREW SPEED THROUGH SPACE ON THEIR SOLAR-POWERED SPACESHIP TOWARD EARTH'S NEAREST CONSTELLATION, CENTAURUS ... 4½ LIGHT YEARS AWAY! DR. COSMOS IS GIVING A TALK ON THE ORIGIN OF STARS.

...SO, IF THIS THEORY OF OUR PHYSICAL UNIVERSE IS CORRECT, THERE ARE BOUND TO BE PLANETS REVOLVING AROUND AT LEAST ONE OF THE TRIPLE SUNS IN CENTAURUS!



"INTERSTELLAR SPACE CONTAINS GIGANTIC CLOUDS OF DUST AND GAS COMPOSED OF VAST AMOUNTS OF MICROSCOPIC MATERIAL. THIS NEBULOUS STAR DUST HAS ALL OF THE ORDINARY ELEMENTS FOUND ON EARTH... HYDROGEN, HELIUM, OXYGEN, NITROGEN, CARBON AND SO ON. SO, ALL THE BILLIONS OF SUNS MUST BE VERY SIMILAR TO OUR OWN SOLAR SYSTEM."



DURING THE COURSE OF MILLIONS OF YEARS, THE PARTICLES MAKING UP THE DUST CLOUDS WOULD BE GRADUALLY DRAWN TOGETHER UNTIL THE MASS ATTAINED A DENSITY SUFFICIENT FOR GRAVITY TO TAKE EFFECT.



"THEN, THE CLOUD WOULD BEGIN TO CONTRACT AND AFTER MORE MILLIONS OF YEARS A NEW SUN WOULD BE BORN. IT'S HAPPENING ALL THE TIME...EVEN NOW! IF PARTS OF ONE OF THOSE DUST CLOUDS BECAME SEPARATED, THOSE PARTS WOULD CONDENSE INTO SMALLER MASSES WHICH WOULD DEVELOP INTO PLANETS TIED TO THEIR SUN BY GRAVITY."



"THESE SMALLER WORLDS WOULD BE MOLTEN HOT BUT, BEING RELATIVELY SMALL, THE HEAT FORMED BY THEIR CONTRACTION WOULD NOT BE SUFFICIENT TO START THE NUCLEAR REACTIONS THAT MADE THE LARGE MASS RADIATE AS A SUN. GRADUALLY THE PLANETS WOULD COOL OFF."



SPACE CONQUERORS!

BY AL STENZEL

THE LONG VOYAGE TO THE FAR DISTANT CONSTELLATION, CENTAURUS, IS NEARING ITS END. THE SOLAR-POWERED SPACESHIP CAPTAINED BY DR. COSMOS HAS CONQUERED THE FIRST LEG OF ITS HAZARDOUS FLIGHT.

WE'LL MAKE IT! PROXIMA CENTAURI IS ON THE SCOPE, GROWING BIGGER EVERY SECOND...AND THE DOUBLE SUNS, BETA AND ALPHA, TOO! WE'RE GETTING CLOSE, DR. COSMOS!

AND HIGH TIME! EIGHT YEARS AT HALF THE SPEED OF LIGHT!

A FEW MORE HOURS, THEN...ALARM BELLS RING THROUGHOUT THE ENTIRE SHIP.

CLANG CLANG

GENERAL ALARM! WHAT'S UP?

WE'RE GOING TO TUMBLE SHIP AND START DECELERATING. STAND BY YOUR EMERGENCY STATION!

THE HUGE BALANCING GYROSCOPES TURN THE SPACESHIP END OVER END WHILE IN FULL FLIGHT SO THAT THE POWERFUL ROCKETS CAN BE USED TO CHECK ITS TREMENDOUS SPEED.



ALTHOUGH NOW TRAVELING "BACKWARDS" THE SHIP PLUNGES ON, GRADUALLY SLOWING AS ITS ROCKETS BLAST AGAINST ITS FORWARD THRUST.

NOW COMES THE BIG QUESTION...WILL THEY FIND A PLANET IN THIS CONSTELLATION ON WHICH TO LAND? RUMORS FLY THICK AND FAST!

I HEARD WE WON'T BE ABLE TO SLOW DOWN FAST ENOUGH AND WE'LL BE DRAWN RIGHT INTO ONE OF THESE SUNS!

NAW...I HEARD WE'VE RECEIVED RADIO SIGNALS FROM A WELCOMING COMMITTEE ON A BIG PLANET!

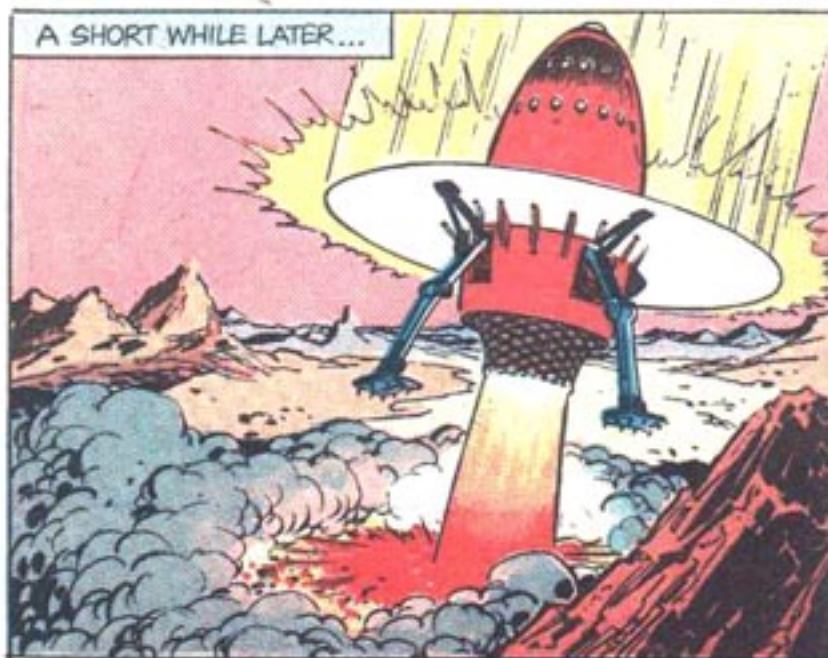


THEN...A FEW DAYS LATER...

DR. COSMOS! LOOK! TWO-THREE...FIVE... SIX PIPS ON THE RADARSCOPE! THEY MUST BE PLANETS!

GOOD...WE'LL CHOOSE A LARGE ONE NOT TOO FAR FROM PROXIMA!





WITH A FINAL BURST OF ITS ROCKETS THE SHIP JOLTED TO A BOUNCY LANDING ON THE SURFACE OF "PLANET X." AS SOON AS THE GROUND BENEATH COOLED ENOUGH THE SPECIAL LANDING CREW WAS LOWERED WITH THEIR EQUIPMENT TO TEST THE ATMOSPHERE OF THIS FAR AWAY WORLD. THIS MUCH OF DR. COSMOS' THEORY WAS CORRECT... THERE WERE PLANETS SIMILAR TO EARTH REVOLVING AROUND THE SUNS OF OTHER GALAXIES. BUT COULD LIFE AS WE KNOW IT EXIST ON THEM?



SPACE CONQUERORS!

BY AL STENZEL

HAVING SUCCESSFULLY BRIDGED THE VAST DISTANCE FROM EARTH TO PLANET X, ONE OF THE MANY WORLDS REVOLVING AROUND PROXIMA, THE THIRD SUN IN THE CONSTELLATION CENTAURUS, THE HARDY VOYAGERS PREPARE TO SEND OUT AN EXPLORATION PARTY. THE ATMOSPHERE HAS BEEN TESTED AND FOUND BREATHABLE FOR HUMANS. NOW A SOLAR-POWERED HELICOPTER IS ASSEMBLED...

I DON'T WANT YOU TWO TAKING ANY UNNECESSARY CHANCES. YOU ARE TO EXPLORE THE POSSIBILITY OF LIFE FORMS ON THIS PLANET AND TRY TO FIND A MORE PLEASANT LOCATION FOR THE SPACESHIP!



RIGHT, DR. COSMOS. THIS PART OF THE COUNTRY IS NO PLACE FOR A PERMANENT BASE.

IN A FEW MINUTES THE HELICOPTER HAS CROSSED THE DESERT WASTE, CLIMBED OVER THE SURROUNDING MOUNTAINS AND COMES TO A VAST INLAND SEA...



MAN! THAT'S LUSH GREEN DOWN THERE. LET'S LAND ON THE WATER AND TAKE A LOOK AROUND!

WE'LL PUT ON OUR DIVING GEAR AND GO BELOW THE SURFACE. THERE CERTAINLY MUST BE MARINE LIFE IN THAT WATER.

NOTICE SOMETHING FUNNY ABOUT THAT VEGETATION?...IT'S THE SAME TYPE THAT GREW ON EARTH MILLIONS OF YEARS AGO DURING THE DEVONIAN PERIOD! WE STILL FIND FOSSILIZED REMAINS IN LUMPS OF COAL!



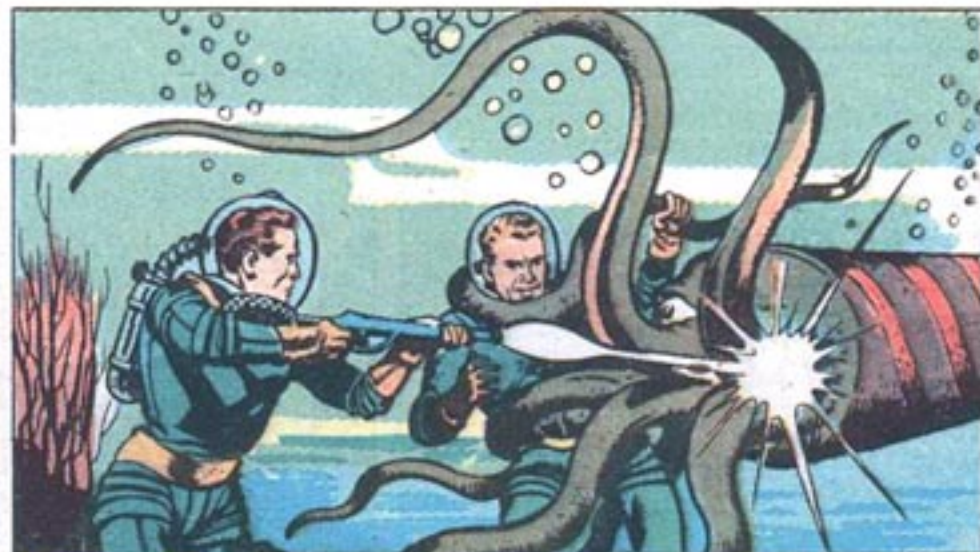
SETTING THEIR HELICOPTER DOWN ON THE PLACID SURFACE OF THE INLAND SEA, THE TWO MEN DON THEIR DIVING GEAR AND DIVE INTO THE WARM, CLEAR WATER. THEY CAN HARDLY BELIEVE THE SIGHT WHICH MEETS THEIR EYES...



FOR HERE ARE LIVING EXAMPLES OF MARINE LIFE WHICH HAVE BEEN EXTINCT ON EARTH FOR MILLIONS OF YEARS. TRILOBITES, CORALS, GRAPTOLITES, SIDNEVIA AND HUNDREDS OF OTHER STRANGE INVERTEBRATES WHICH NO HUMAN HAS EVER SEEN EXCEPT AS FOSSILS.



SUDDENLY, WITHOUT WARNING, A GIANT NAUTILOID SPEEDS FROM BEHIND A WALL OF CORAL AND GRASPS ONE OF THE MEN WITH ITS EIGHT POWERFUL TENTACLES! A SIMILAR FORM OF SEA LIFE LIVED IN EARTH'S SEAS DURING THE ORDOVICIAN PERIOD ABOUT 450 MILLION YEARS AGO. THIS CREATURE WAS RELATED TO THE MODERN SQUID AND OCTOPUS, BUT ENCLOSED IN A SHELL, FIFTEEN FEET LONG!



QUICKLY COMING TO HIS COMRADE'S RESCUE, THE OTHER DIVER PLACES A WELL-AIMED JET-PROPELLED SPEAR INTO THE EYE OF THE NAUTILOID, FORCING IT TO RELEASE ITS STRANGLING GRIP.



YOU'RE OKAY NOW, BUT IT WAS CLOSE! IMAGINE BEING ATTACKED BY A CREATURE THAT'S SUPPOSED TO HAVE BEEN EXTINCT HALF A BILLION YEARS!

I'M STILL SHAKEN! LET'S GET ABOARD THE 'COPTER AND I'LL TELL YOU HOW IT FEELS!

HOW COME THOSE PRIMITIVE LIFE FORMS STILL EXIST HERE? THIS PLANET MUST BE AS OLD AS THE EARTH!

WELL, EITHER LIFE BEGAN HERE AT A MUCH LATER DATE THAN ON EARTH, OR THESE SURROUNDING MOUNTAINS HAVE PROTECTED THIS INLAND SEA FROM INFLUENCES THAT MIGHT OTHERWISE HAVE FORCED THE ANIMAL AND VEGETABLE LIFE HERE TO ADAPT ITSELF TO CHANGES!

WE'LL RETURN TO THE SPACESHIP AND REPORT. THEN WE CAN LOOK AROUND FOR A GOOD BASE!

I THINK WE'RE GOING TO FIND MANY SURPRISES ON THIS PLANET...AND WE'D BETTER WARN EVERYONE TO BE CONSTANTLY ON GUARD!

SPACE CONQUERORS!

by AL STENZEL

DR. COSMOS AND HIS SPACE CREW HAVE LANDED ON "PLANET X" WHICH IS ONE OF A NUMBER OF WORLDS REVOLVING AROUND THE SUN "PROXIMA" IN THE CONSTELLATION "CENTAURUS".

AN EXPLORING CREW HAS JUST RETURNED TO THE SPACESHIP IN A SOLAR-POWERED HELICOPTER AFTER AN EXCITING ADVENTURE WITH A GIANT NAUTILOID IN AN INLAND SEA.

THE GANG WILL BE DISAPPOINTED THAT WE DIDN'T FIND A BETTER BASE THAN THIS HOT DESERT.

WE'LL MAKE OUR REPORT ON THE MARINE LIFE WE FOUND AND SEARCH AGAIN TOMORROW.

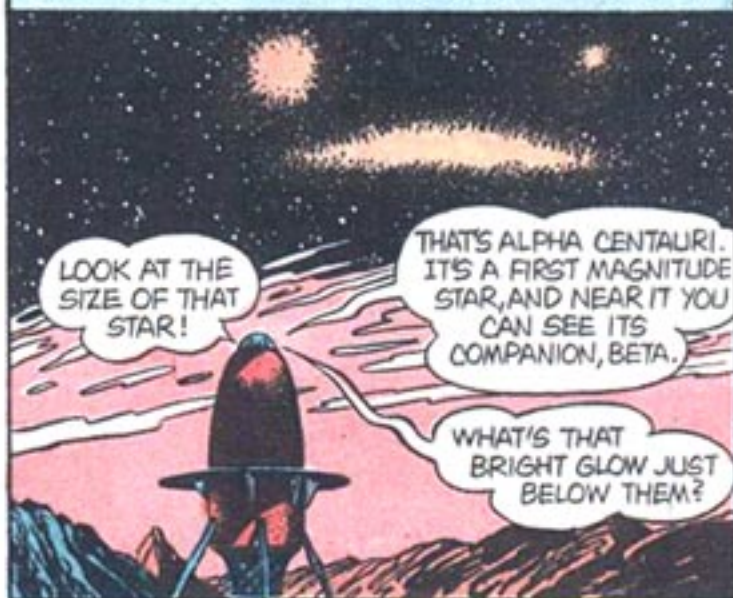


NIGHT ON PLANET X PROVES TO BE AN AMAZING SIGHT...

LOOK AT THE SIZE OF THAT STAR!

THAT'S ALPHA CENTAURI. IT'S A FIRST MAGNITUDE STAR, AND NEAR IT YOU CAN SEE ITS COMPANION, BETA.

WHAT'S THAT BRIGHT GLOW JUST BELOW THEM?



THAT'S A CLUSTER OF SOME 50,000 STARS CALLED OMEGA CENTAURI...ALL PART OF THE CONSTELLATION CENTAURUS.

THE NIGHTS HERE ARE CERTAINLY LIGHT WITH ALL THOSE BRIGHT STARS IN THE HEAVENS! WHAT A BEAUTIFUL SIGHT! EARTH NIGHTS CAN'T COMPARE WITH THESE.



YES, A DOUBLE STAR IN THE SKY ADDS A LOT OF BRILLIANCE TO THE NIGHTS. SEE, ON THIS SKY-CHART...HERE'S ALPHA AND HERE'S BETA REVOLVING AROUND IT ABOUT ONCE EVERY EIGHTY YEARS. PROXIMA, THIS SUN, REVOLVES AROUND BOTH IN AN ENORMOUS CURVE OVER A PERIOD OF 300,000 YEARS!

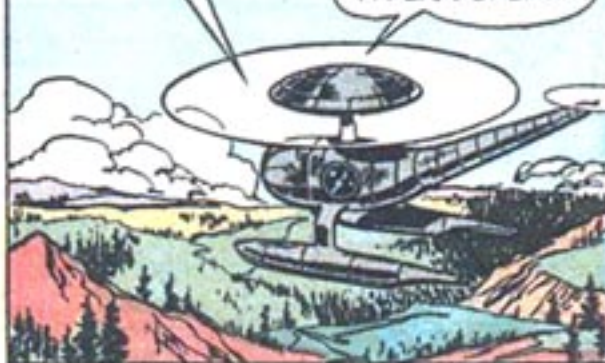


MAN, THAT'S SOME JOURNEY!

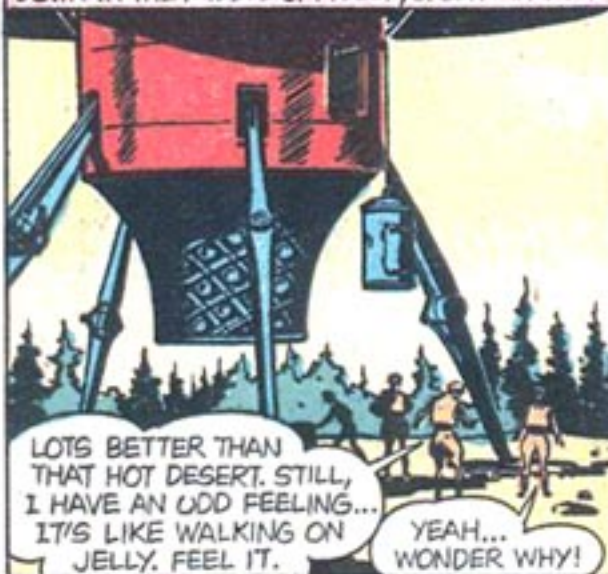
NEXT DAY THE TWO HELICOPTER PILOTS TAKE OFF AGAIN TO FIND A MORE PLEASANT BASE FOR THE SPACESHIP.

DR. COSMOS SAID WE'RE NOT TO FOOL AROUND WITH THE LOCAL FAUNA... HEY, LOOK DOWN THERE!

LOVELY! JUST LIKE THE NORTHWEST BACK ON EARTH. RADIO THE SHIP... THIS WILL MAKE A PERFECT BASE!



A SHORT WHILE LATER THE SPACESHIP SETTLES DOWN IN THE MIDDLE OF A LUSH, GREEN MEADOW.



DR. COSMOS CALLS HIS CREW TOGETHER...

MEN, THIS PLANET RESEMBLES EARTH IN MANY WAYS BUT THERE'S NO TELLING WHAT WE MIGHT RUN UP AGAINST. WE ALMOST LOST TWO 'COPTER PILOTS IN THAT INLAND SEA. WE'VE GOT A LOT OF EXPLORING TO DO AND A LOT OF REPAIRS TO MAKE. NO ONE IS TO GO AROUND ALONE. KEEP IN TOUCH WITH THIS BASE AT ALL TIMES. THE SOONER WE DO OUR JOB HERE, THE SOONER WE HEAD FOR HOME!



THE MEN NO SOONER START ON THEIR VARIOUS DUTIES, WHEN...



THREE POWERFUL QUAKES SHAKE THE AREA BEFORE THE GROUND STOPS QUIVERING, THEN...



THE CREW SOON REPAIR THE SHIP AND THAT NIGHT DISCUSS THE SITUATION.





SPACE CONQUERORS!

BY AL STENZEL

DR. COSMOS' SOLAR-POWERED HELICOPTER AGAIN TAKES OFF FROM THE BASE ON PLANET X IN THE CONSTELLATION CENTAURUS FOR FURTHER EXPLORATION.



"THIS IS A STRANGE PLANET! IT'S A LOT LIKE EARTH MUST HAVE BEEN IN PREHISTORIC TIMES!"

"I'LL SAY ONE THING FOR IT—WE HAVEN'T HAD A DULL MOMENT SINCE WE LANDED HERE!"



"LOOK AT THE FACE OF THAT CLIFF! IT'S COVERED WITH HUGE BIRDS OF SOME KIND!"

"IT'S A ROOKERY...THERE MUST BE THOUSANDS OF 'EM! LET'S FLY OVER FOR A CLOSER LOOK!"



"HEY! THOSE AREN'T BIRDS... THEY'RE MONSTERS! LET'S GET OUT OF HERE FAST!"

"THEY'RE PTERODACTYLS! A FLYING REPTILE THAT EXISTED ON EARTH A HUNDRED AND FIFTY MILLION YEARS AGO!"



"IT'S TOO LATE! I'LL HAVE TO TRY TO LAND WHERE WE CAN FIGHT 'EM OFF!"



"WHAM! THAT WAS A ROUGH LANDING, BUT THESE BABIES ARE MEAN! WE'VE GOT TO GET OUT FAST WHERE WE CAN USE OUR GUNS!"

"THERE'S A CAVE—GET AS CLOSE AS YOU CAN AND WE'LL MAKE A RUN FOR IT!"



"WE'RE SAFE FROM THEM IN HERE BUT WE'VE GOT TO KEEP THEM OFF THE 'COPTER!"

"RIGHT! IF THAT GETS WRECKED, WE'RE OUT OF LUCK!"



"WELL, WE DROVE 'EM AWAY... AT LEAST FOR A WHILE, MAYBE. WHEN IT GETS DARK WE CAN GET BACK IN THE 'COPTER AND MAKE OUR GETAWAY."

"LOOK AT THE SIZE OF THIS MONSTER! MUST BE AT LEAST A TWENTY-FOOT WINGSPREAD."



"AS THE TWO PILOTS WAIT FOR DARKNESS, THEY COLLECT A FEW OF THE HUGE FLYING REPTILES TO TAKE BACK TO THE SPACESHIP WHEN THEY CAN MAKE THEIR ESCAPE."

"OUR LUCK HELD OUT! BUT FOR THIS CAVE WE'D BE A PTERODACTYL DINNER BY NOW!"

"STRANGE—ALTHOUGH SCIENTISTS BELIEVE BIRDS DEVELOPED FROM REPTILES, THESE CREATURES ARE NOT RELATED TO BIRDS AT ALL!"

SPACE CONQUERORS!



by AL STENZEL

TWO HELICOPTER PILOTS FROM DR. COSMOS' SOLAR-POWERED SPACESHIP ON PLANET X WERE TRAPPED IN A CAVE WHEN PTERODACTYLS FORCED THEIR HELICOPTER DOWN.

THEY DROVE OFF THE VICIOUS FLYING REPTILES WITH THEIR RAY GUNS BUT WHEN THEY RETURNED TO THEIR HELICOPTER...

RETURNING TO BASE—
RIGHT! OVER AND
OUT!

BETTER NOT BE
TOO SURE...I CAN'T
GET THE SOLAR POWER
WORKING...SOMETHING'S
BUSTED!



THEN AS DARKNESS FELL...

LET'S FACE IT...I CAN'T LOCATE
THE TROUBLE WITHOUT THE
Z-RAY DETECTOR, AND THAT'S
BACK AT THE BASE.

OH, OH...THAT
MEANS WE
HAVE TO HIKE
ALL THE WAY
BACK!



WE'LL TAKE OUR SURVIVAL
GEAR AND STAY IN THE
CAVE UNTIL MORNING.

MAYBE THAT
PTERODACTYL
SPECIMEN WILL KEEP
IF WE HIDE IT WAY BACK
IN THE CAVE!



PSST...HEAR
THAT? SOUNDS
LIKE A LARGE
ANIMAL SNIFFING
AROUND OUTSIDE!

PROBABLY SMELLS
THE PTERODACTYL...
DOUBT IF IT'LL
COME IN HERE
PAST THE FIRE!

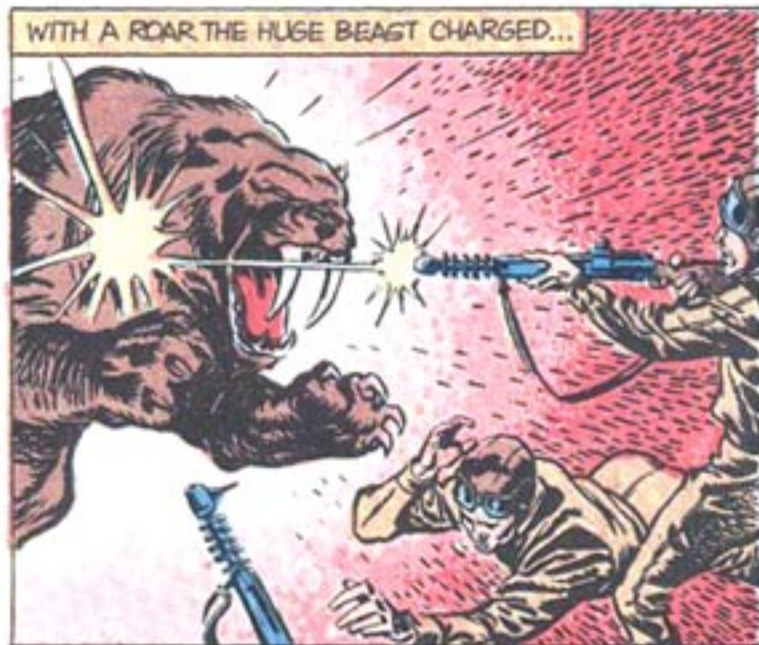


BUT THIS WAS NO ORDINARY BEAST...FIRE HELD NO
TERRORS FOR THIS FELLOW...IT WAS A GIGANTIC
SABER-TOOTHED TIGER!

LOOK AT THE SIZE OF IT...
AND IT'S COMING RIGHT IN!

DON'T JUST
LOOK...FIRE!





SPACE CONQUERORS!

BY AL STENZEL

GROUNDED BECAUSE THEIR SOLAR-POWERED HELICOPTER HAD BEEN DISABLED BY A FLOCK OF HUGE PTERODACTYLS, THE TWO PILOTS START THE LONG HIKE BACK TO THEIR SPACE SHIP BASE.



PLANET X DIDN'T LOOK THIS ROUGH FROM THE AIR! WE MUST'VE CLIMBED UP AT LEAST A MILE SINCE MORNING!

WHY COULDN'T WE HAVE DISCOVERED A PLANET WITH PEOPLE ON IT... AND SUPER HIGHWAYS!



BY LATE AFTERNOON...

BAGE...CAN YOU READ ME? WE'RE ON TOP OF THE FIRST RANGE...ALL'S WELL. CAN'T SEE ANY PLACE FOR THE SHIP TO LAND SO WILL KEEP TRAVELING YOUR WAY.

DOCTOR COSMOS SHOULD HAVE INSISTED ON CARRYING TWO HELICOPTERS. THEN WE WOULDN'T HAVE BEEN MARDOONED THIS WAY!



WE'D BETTER CAMP HERE FOR THE NIGHT...IT'S A GOOD LEVEL SPOT. TOO RISKY TO GO FURTHER IN THE DARK.



RIGHT! I'LL TAKE THE FIRST WATCH...DON'T WANT TO BE SURPRISED BY ANOTHER SABER-TOOTHED TIGER... OR ANYTHING ELSE!

STARTING AGAIN AS SOON AS IT WAS LIGHT, THE TWO REACHED THE BOTTOM OF THE HIGH CLIFF ONLY TO FIND THEMSELVES FACED BY A FOREST OF THICK JUNGLE GROWTH.



HOW'RE WE GOING TO GET THROUGH THAT WITHOUT MACHETES? THIS PLANET'S BEGINNING TO MAKE ME MAD!

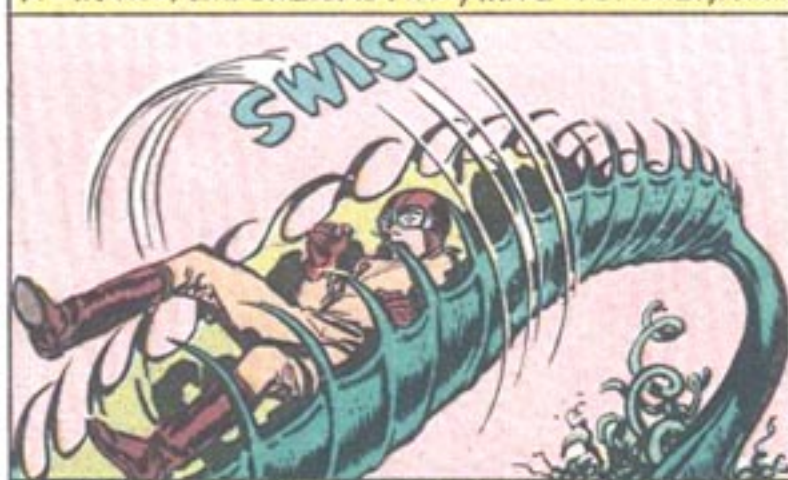
THERE'S A SMALL STREAM. WE'LL FOLLOW IT AS FAR AS WE CAN.

OUCH! THESE BUGS BITE! NEVER TASTED HUMANS BEFORE AND THEY LIKE OUR FLAVOR!

GOOD THING WE'VE GOT THESE GOGGLES OR WE'D BE BLINDED!



SUDDENLY, AS THE LEAD MAN ACCIDENTLY BRUSHED AGAINST A STRANGE, EVIL SMELLING PLANT, THERE WAS A SWISH, AND...



...WITH A LIGHTNING-LIKE SNAP AN ENORMOUS, GAPING LEAF-POD GRAPED THE MAN AND ENFOLDED HIM WITH STEEL-LIKE SPIKES.

DON'T STRUGGLE! I'LL SHOOT OFF ITS STEM! IT'S A GIANT TRAP LIKE THE VENUS FLY TRAPS ON EARTH!

BE CAREFUL YOU DON'T GET CAUGHT BY ANOTHER ONE!



WHEW! WE'VE GOT TO WATCH OUR STEP ON THIS PLANET X...EVERYTHING WE MEET WANTS TO EAT...US!

I'M A BIT SHAKY BUT LET'S GET AWAY FROM HERE FAST AND FIND A SPOT WHERE THE SHIP CAN PICK US UP.



ALL DAY THEY STRUGGLED THROUGH THE DENSE JUNGLE...

WE'D BETTER REACH THE END OF THIS JUNGLE BEFORE IT GETS DARK. THIS IS NO PLACE TO SPEND THE NIGHT!

SEEMS TO BE GETTING THINNER... MAYBE WE'RE NEARING OPEN COUNTRY.



...AND JUST AS DARKNESS FELL...

HEY, LOOK! **OPEN COUNTRY!** GOOD! NOW WE CAN CALL THE SHIP TO COME AND GET US!

I'LL TAKE A FIX AND GIVE 'EM OUR POSITION AS NEAR AS I CAN FIGURE IT.



BUILDING A LARGE FIRE FOR A BEACON, THE TWO MEN MUNCHED ON EMERGENCY RATIONS AS THEY WAITED FOR THE SHIP TO SPOT THEM...

THERE SHE IS! COMIN' THIS WAY WITH ALL JETS POPPIN'!

I HAVEN'T SEEN ANYTHING SO PRETTY SINCE I GOT MY GOLD WINGS AT SPACE SCHOOL.



SPACE CONQUERORS!

BY
AL STENZEL

ON BOARD THE SOLAR-POWERED SPACE SHIP ON PLANET X IN THE CONSTELLATION ALPHA CENTAURI, DOCTOR COSMOS MUSTERS THE CREW...

I HAVE CALLED YOU ALL TOGETHER IN ORDER TO SET YOUR MINDS AT REST ON A QUESTION I UNDERSTAND IS BOTHERING SOME OF YOU. STATE YOUR QUESTION, LIEUTENANT.

YES, SIR. IF THE THEORY OF THE EXPANDING UNIVERSE IS TRUE, AREN'T WE GETTING FARTHER AND FARTHER AWAY FROM EARTH EVERY DAY WE STAY HERE?

I SEE...YOU MEAN THE DISTANCE BETWEEN HERE AND EARTH IS INCREASING SO RAPIDLY WE MAY NEVER BE ABLE TO RETURN? LET ME EXPLAIN THE THEORY OF THE EXPANDING UNIVERSE TO YOU.

"AWAY BACK IN 1929 AN ASTRONOMER ON MOUNT WILSON, EDWIN P. HUBBEL, MADE A VERY REMARKABLE DISCOVERY..."

ACCORDING TO THESE SPECTROGRAPHS THE GIANT CLUSTERS OF STARS WHICH WE CALL GALAXIES SEEM TO BE RUNNING AWAY FROM EACH OTHER AT FABULOUS SPEEDS!

YOU MEAN THE UNIVERSE IS EXPANDING?

"AND THAT WAS EXACTLY WHAT HE MEANT! ON HIS SPECTROGRAPH, A GLASS PRISM THROUGH WHICH HE WAS ANALYZING THE COLOR COMPONENTS OF STARLIGHT, HE NOTICED A CURIOUS FACT..."

"ALL THE LINES ON THE SPECTROGRAPH, REGARDLESS OF THEIR WAVE LENGTH OR COLOR, WERE MOVING TOWARD THE RED END OF THE SPECTRUM...AND THIS "RED SHIFT" WAS IN DIRECT PROPORTION TO THE DISTANCE OF THE GALAXY TO THE EARTH!"

ALL I CAN DEDUCE FROM THIS IS THAT THE SOURCE OF LIGHT IS MOVING AWAY FROM US!

AH, SIMILAR TO THE "DOPPLER EFFECT" ...THE WAY A TRAIN WHISTLE CHANGES PITCH AS THE TRAIN APPROACHES AND THEN SPEEDS AWAY!

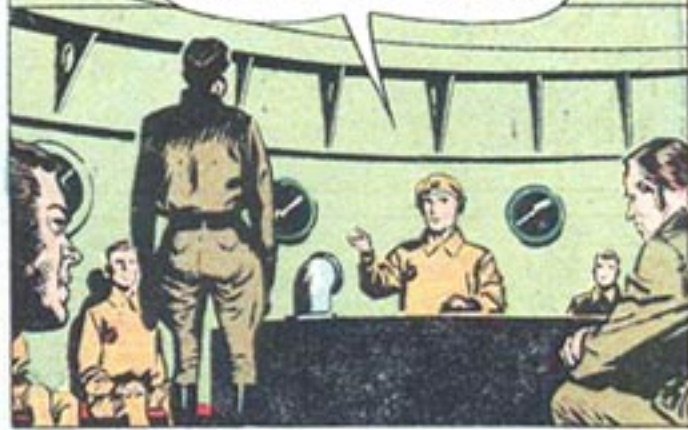
"THIS THEORY LED TO THE CONCLUSION THAT AT SOME POINT BILLIONS OF YEARS AGO THE GASES OF WHICH THE ELEMENTS WERE FORMED WERE COMPACTED IN A MASS WHICH EXPLODED...AND THE PARTS ARE STILL RACING AWAY INTO SPACE..."



"HOWEVER, LATER OBSERVATIONS INDICATED THAT THE LIGHT FROM THESE DISTANT GALAXIES WAS ACTUALLY REDDER WHEN THEIR LIGHT WAS EMITTED WHICH REACHED EARTH MILLIONS OF YEARS LATER."



BUT...EVEN IF THE EXPANDING UNIVERSE THEORY IS TRUE...IT'S THE GALAXIES THAT ARE MOVING AWAY FROM EACH OTHER. SINCE EARTH AND ALPHA CENTAURI ARE IN THE SAME GALAXY THEIR DISTANCE FROM EACH OTHER REMAINS CONSTANT - SO REST EASY.



NOW, IF YOUR FEARS OF BEING MAROONED ON PLANET X HAVE BEEN SQUELCHED, LET'S GET TO THE BUSINESS AT HAND. TAKE OVER CAPTAIN!

RIGHT, DR. COSMOS. ALL SCIENTIFIC EXPLORATION PARTIES MUST COMPLETE THEIR WORK IN TEN DAYS.



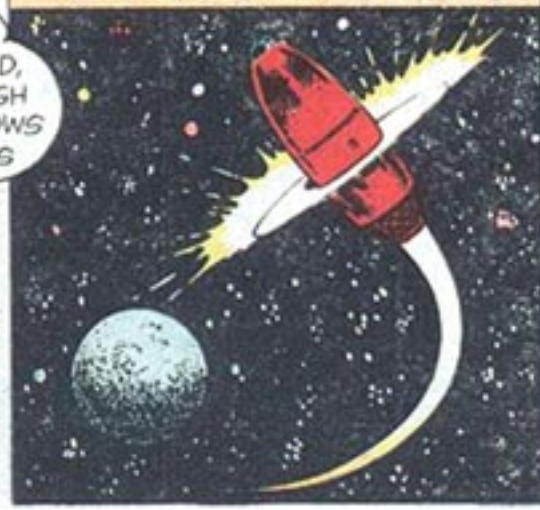
THE MEN WORKED NIGHT AND DAY TO COMPLETE THEIR EXPLORATION OF PLANET X ...KEYED UP BY THE THRILL OF LEAVING TO EXPLORE STILL STRANGER WORLDS...

WELL, THE BOTANY DEPARTMENT IS READY...I'VE COLLECTED ENOUGH SPECIMENS!

THE PHOTO-MAPPING DEPARTMENT IS FINISHED, TOO...I'VE SHOT ENOUGH FILM TO GIVE THE FELLOWS BACK ON EARTH YEARS OF STUDY!

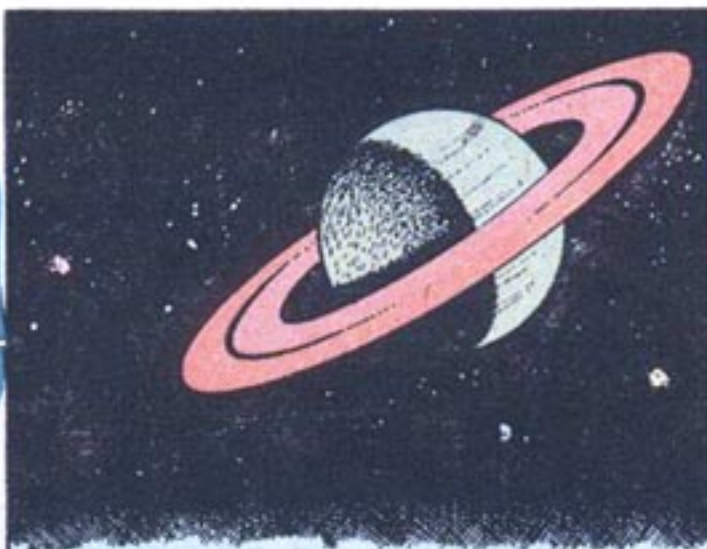


AND TEN DAYS LATER THE GREAT SHIP ZOOMED OFF INTO SPACE TO FIND OTHER PLANETS REVOLVING AROUND THE TRIPLE STAR SYSTEM OF CENTAURUS.

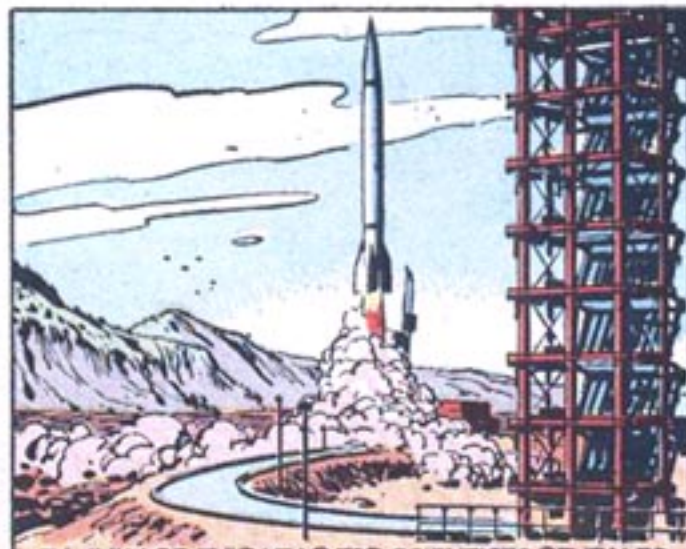




AN EARTH SATELLITE PROJECT IS UNDER WAY!



THE FIRST STEP IN THE CONQUEST OF SPACE AND ALONG THE LONG ROAD TOWARD EVENTUAL INTERPLANETARY TRAVEL HAS JUST BEEN TAKEN!



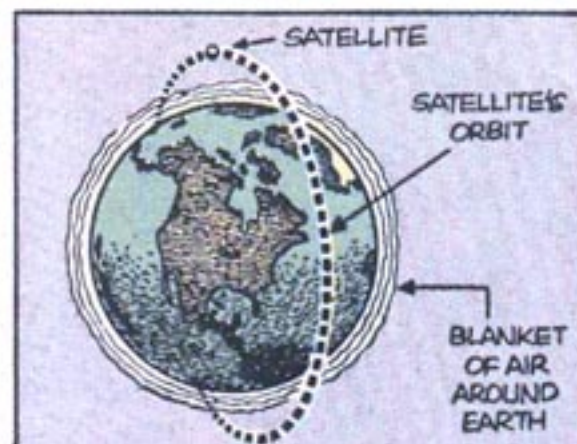
IN JULY OF THIS YEAR TOP SCIENTISTS REVEALED THAT THE UNITED STATES IS WORKING ON FOUR MAJOR PROJECTS TO SPEED CONSTRUCTION OF AN EARTH SATELLITE.



TWO MAIN DESIGNS ARE UNDER STUDY. ONE, A SPHERE ABOUT THE SIZE OF A BASKETBALL, ABOUT $9\frac{1}{2}$ INCHES IN DIAMETER, THE OTHER A STREAMLINED "BASEBALL BAT" ABOUT ONE FOOT LONG.



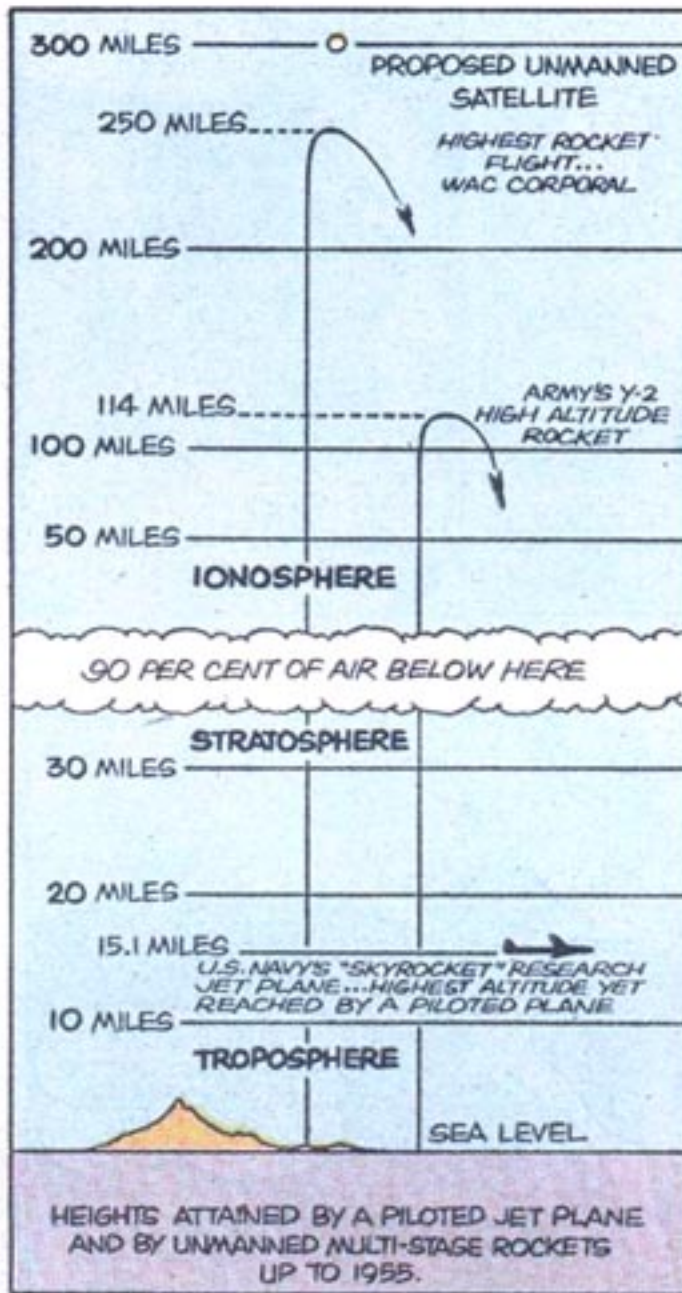
INTENSIVE RESEARCH INTO THE TYPE AND NUMBER OF ROCKETS REQUIRED TO CARRY THE SATELLITE INTO THE ORBITING AREA AND GIVE IT THE NECESSARY INITIAL SPEED IS ALREADY UNDER WAY.



PRESENT PLANS CALL FOR A SATELLITE THAT WOULD REVOLVE AROUND THE EARTH AT A SPEED OF 18,000 MILES PER HOUR AT A HEIGHT OF 300 MILES ABOVE THE EARTH'S SURFACE...CIRCLING THE EARTH ONCE EVERY 90 MINUTES!



AT WHITE SANDS PROVING GROUNDS IN NEW MEXICO, MULTI-STAGE ROCKETS HAVE ALREADY BEEN SENT UP TO ALTITUDES OF MORE THAN 250 MILES. PATRICK AIR FORCE BASE IN FLORIDA ALSO IS CARRYING ON IMPORTANT GUIDED MISSILE PROJECTS.



THIS UNMANNED EARTH SATELLITE, FILLED WITH SCIENTIFIC INSTRUMENTS TO RECORD COSMIC RAY EFFECTS AND OTHER SPACE DATA WILL BE LAUNCHED WITHIN TWO YEARS. THE RESULTS OF THIS MOMENTOUS PROJECT WILL CERTAINLY LEAD TO MAN'S CONQUEST OF SPACE... FIRST THE EARTH SATELLITE... NEXT, THE MOON, THEN MARS, AND THEN... WHO KNOWS? WILL MAN EVER REACH THE STARS?

SPACE CONQUERORS!

BY AL STENZEL

MILLIONS OF MILES IN OUTER SPACE, THE GREAT SOLAR-POWERED SPACESHIP EXPLORES THE PLANETS IN THE CONSTELLATION ALPHA CENTAURI, FOUR AND A HALF LIGHT YEARS FROM THEIR HOME PLANET, EARTH...

...AND ON BOARD THE GIANT SHIP THE SCIENTISTS REVIEW THEIR AMAZING FINDINGS...

ACCORDING TO ALL THE DATA WE HAVE COMPILED, THIS CONSTELLATION IS VERY SIMILAR TO OUR OWN SOLAR SYSTEM.

IT CERTAINLY HAS MANY THINGS IN COMMON.



"THE FIRST PLANET WE LANDED ON WAS A GREAT DEAL LIKE OUR EARTH. MUST HAVE BEEN MANY MILLIONS OF YEARS AGO IN ITS ANIMAL AND PLANT LIFE..."



"THE NEXT ONE WAS ENVELOPED IN A MANTLE OF METHANE GAS AND AMMONIA CRYSTALS AS IS OUR PLANET JUPITER..."

THAT GAS IS DEADLY TO ALL FORMS OF LIFE THAT WE KNOW OF.

WE WILL NOT ATTEMPT TO LAND.



"I DOUBT IF ANY OF US WILL EVER FORGET OUR EXPERIENCE ON THE TENTH PLANET OF PROXIMA CENTAURUS, THE THIRD SUN IN THIS CONSTELLATION! WE HAD JUST LANDED WHEN..."



THESE CRATERS ARE LIKE THOSE ON EARTH'S MOON - BUT THESE ARE OF RECENT ORIGIN.

THIS ONE IS STILL HOT FROM THE METEOR THAT STRUCK HERE NOT LONG AGO.



"SUDDENLY THE RADAR WARNING SYSTEM
FLASHED THE EMERGENCY DANGER SIGNAL..."

SIGNAL ALL LANDING PARTIES
TO RETURN TO THE SHIP ON THE
DOUBLE. A METEOR IS
HEADING RIGHT FOR US!



"...WE ALL RACED BACK TO THE SHIP AS
FAST AS WE COULD IN OUR AWKWARD
SPACESUITS...AND ZOOMED OFF THAT
UNFRIENDLY PLANET JUST IN THE
NICK OF TIME!"



"THAT METEOR SLAMMED DOWN IN A FLAWING CRASH
RIGHT WHERE OUR SHIP HAD BEEN PARKED!"

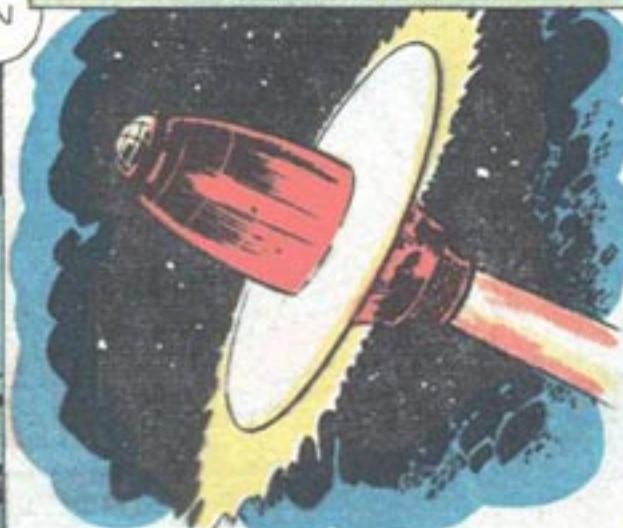


THAT WAS TIMING IT PRETTY CLOSE!
I'M NOT SORRY OUR TIME LIMIT FOR
THIS VOYAGE IS UP. PASS THE WORD
WE'RE HEADING FOR HOME!

GOOD NEWS,
DOCTOR COSMOS.
WE'VE GOT
ENOUGH DATA ON
THIS CONSTELLATION
TO KEEP OUR
SCIENTISTS
BUSY.



HOMEWARD BOUND AFTER MANY YEARS
AWAY FROM EARTH, THE SPACESHIP FLASHES
THROUGH THE VOID OF OUTER SPACE AT
FULL ROCKET POWER.



AND FINALLY THE GREEN GLOBE OF EARTH
LOOMS AHEAD...THE LONG VOYAGE OF DISCOVERY
ON THE FAR AWAY CONSTELLATION OF ALPHA-
CENTAURI IS OVER!

MAN, O'MAN!
GOOD OLD
EARTH!

PRETTY, ISN'T
IT? BEST SIGHT
I'VE SEEN IN
MANY YEARS!



SPACE CONQUERORS!

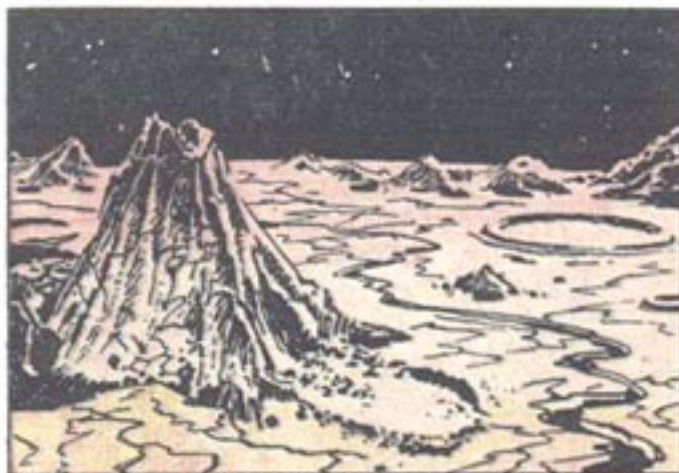
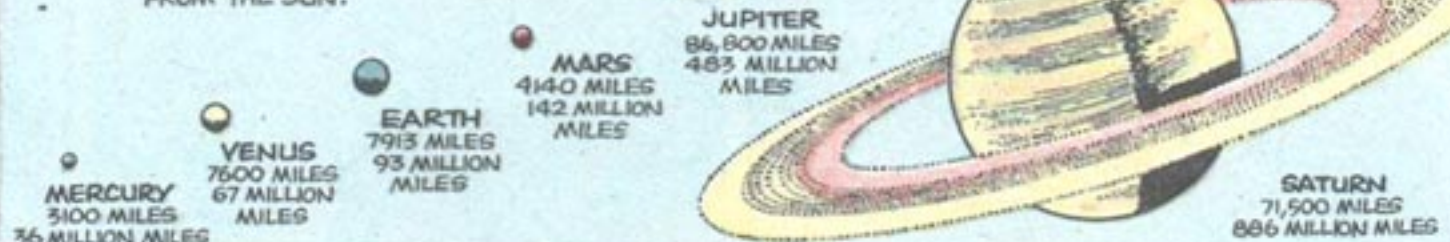


BY AL STENZEL

FIRST STEP IN OUR CONQUEST OF SPACE WILL BE THE LAUNCHING OF AN EARTH SATELLITE ABOUT THE SIZE OF A BASKETBALL. FILLED WITH INSTRUMENTS, THE SATELLITE WILL FURNISH INFORMATION TO HELP US BUILD A MANNED SPACE STATION FROM WHICH TO EXPLORE THE MOON AND PLANETS OF OUR SOLAR SYSTEM.

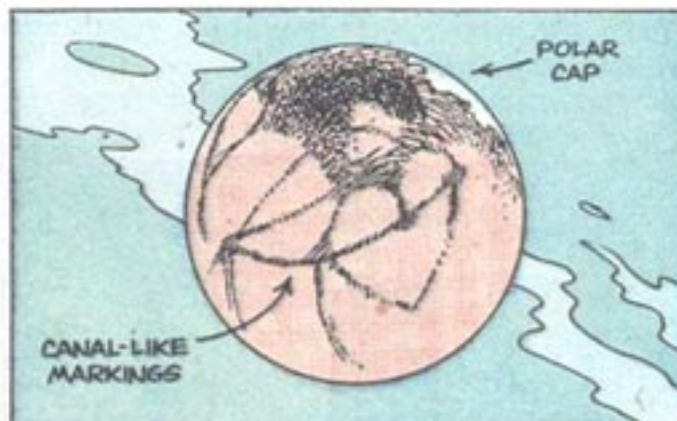
WHERE ARE THE NINE PLANETS OF OUR SOLAR SYSTEM. FOUR OF THEM ARE LARGER THAN EARTH AND FIVE OF THEM ARE FARTHER FROM THE STAR THAT WE CALL THE SUN. ONE OF THEM, PLUTO, MAY NOT BE A PLANET AT ALL BUT A MOON OF NEPTUNE.

THE FIRST NUMBER IS THE PLANET'S APPROXIMATE DIAMETER. THE SECOND NUMBER IS ITS APPROXIMATE DISTANCE FROM THE SUN.



MERCURY ALWAYS KEEPS ONE SIDE TOWARD THE SUN. ON THIS BRIGHT SIDE THE TEMPERATURES ARE HOT ENOUGH TO MELT LEAD (900°F). THE DARK SIDE MAINTAINS A CONSTANT 450° BELOW ZERO TEMPERATURE. MERCURY IS A DEAD WORLD WITHOUT ATMOSPHERE, SKY COLOR, OR WEATHER.

VENUS, THE MORNING AND EVENING "STAR" OF OUR SKY, ACTUALLY IS A PLANET WRAPPED IN HEAVY CLOUDS WHICH REFLECT BRILLIANT LIGHT. THE CLOUDS HIDE THE SURFACE OF THE PLANET AND WE CAN DETECT NO WATER VAPOR IN THEM. THEY MAY BE DUST FROM A DESERT SURFACE. WE HAVE DETECTED CARBON DIOXIDE IN THE CLOUDS OF VENUS, BUT NO OXYGEN.



MARS HAS A THIN ATMOSPHERE WHICH COULD SUSTAIN SOME LIFE AS WE KNOW IT. THIS PLANET IS COLDER THAN EARTH, BUT IT MAY HAVE SEASONS. IT CHANGES COLOR AT CERTAIN TIMES OF THE YEAR, AND WHITE CAPS AT THE POLES INCREASE AND DECREASE REGULARLY. ITS "CANALS" ARE UNUSUAL LINES WHICH SOME ASTRONOMERS HAVE SEEN AND OTHERS HAVE NOT.



AS SEEN FROM ONE OF JUPITER'S MOONS.

JUPITER, THE GIANT, IS SECOND IN BRIGHTNESS TO VENUS. IT HAS ELEVEN MOONS AND AN ATMOSPHERE, PROBABLY COMPOSED OF METHANE, HYDROGEN, AND CLOUDS OF FROZEN AMMONIA. AT LEAST TWO OF THE MOONS OF JUPITER CAN BE SEEN THROUGH THE SMALLEST TELESCOPES.

SATURN WITH ITS DUST CLOUD RINGS IS THE MOST COLORFUL PLANET. IT ALSO HAS NINE MOONS. TITAN, LARGEST OF THESE, IS ALMOST THE SIZE OF MARS. ONE MOON ROTATES IN THE OPPOSITE DIRECTION FROM THE OTHERS AND FROM ALL THE PLANETS IN OUR SOLAR SYSTEM. THERE IS A HYDROGEN AND METHANE ATMOSPHERE HERE.



URANUS, NEPTUNE, AND PLUTO WERE DISCOVERED IN DIFFERENT CENTURIES. URANUS WAS SPOTTED IN 1781 AND NEPTUNE ABOUT 60 YEARS LATER. PLUTO WAS DISCOVERED IN 1905. BECAUSE OF THEIR GREAT DISTANCE FROM US, VERY LITTLE IS KNOWN ABOUT THESE PLANETS. URANUS AND NEPTUNE APPEAR GREEN IN COLOR, WITHOUT MARKINGS. ONCE CALLED THE "DARK PLANET," PLUTO'S COLOR IS STILL UNKNOWN.



HAS THE EARTH AN UNDISCOVERED SECOND MOON? SOME ASTRONOMERS BELIEVE SO...ONE SO SMALL AND SPEEDY IT IS INVISIBLE AGAINST THE DAYTIME SKY AND HIDDEN IN THE EARTH'S SHADOW AT NIGHT. IF THERE IS SUCH A MOON, COULD IT BE USED AS A SPACE STATION? OR MUST A STATION BE BUILT?



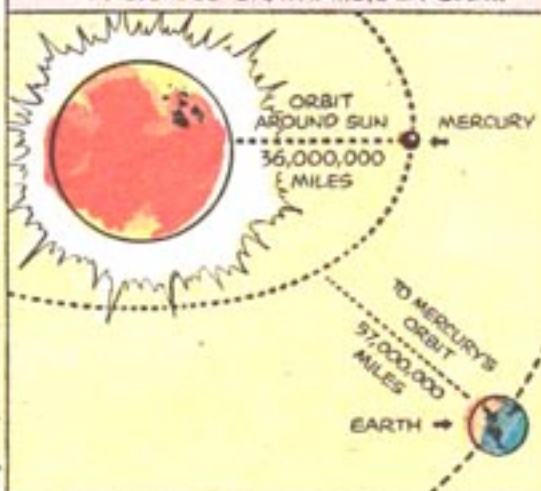
HOW SOON WILL MAN HAVE A SPACE SHIP WHICH CAN TAKE HIM TO THE MOON? TEN YEARS, SAY SOME AUTHORITIES. WHENEVER IT IS, BRAVE MEN, EXPERTS IN MANY SCIENTIFIC FIELDS, WILL ACCOMPLISH THE FEAT.



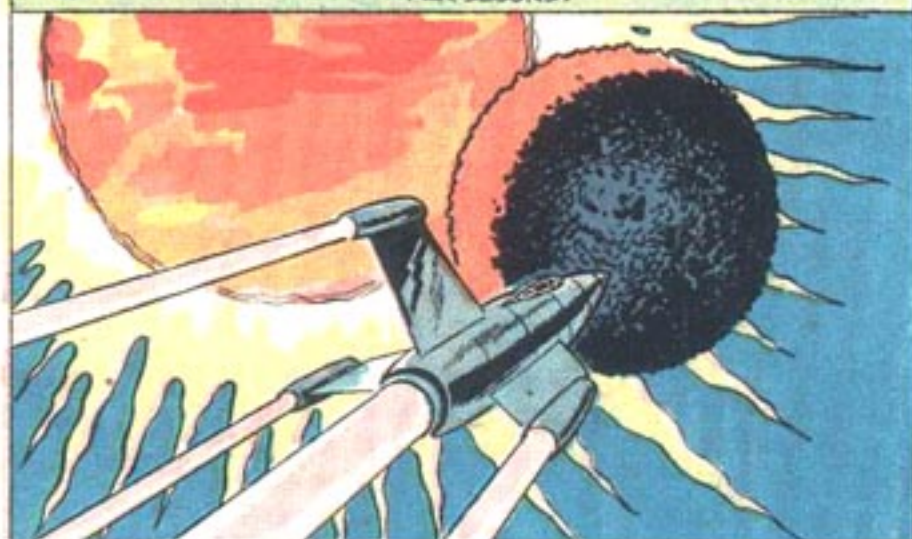
THEN? PERHAPS A MINING COLONY ON THE MOON, OR A HUGE BASE FOR FURTHER PLANETARY EXPLORATION...AND, OF COURSE, A BOY SCOUT TROOP, SPONSORED BY THE LUNAR COLONISTS MEN'S CLUB.



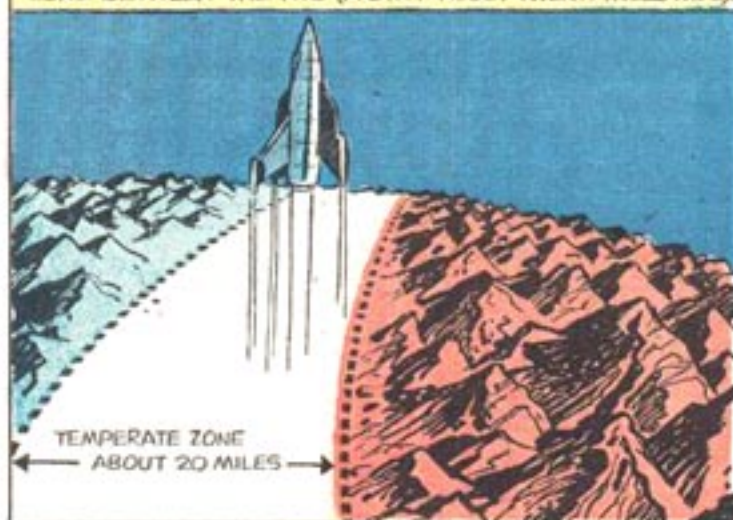
OUR TRIP TO MERCURY WILL BE A VERY HAZARDOUS VOYAGE. FIRST, BECAUSE OF THE NEARNESS OF THAT SMALL PLANET TO THE SUN, EXTREME CAUTION IN NAVIGATION WILL BE NECESSARY TO AVOID THE SUN'S ENORMOUS GRAVITATIONAL PULL...



...SECOND, BECAUSE OUR SHIP'S SPEED OF 18.5 MILES PER SECOND, NECESSARY FOR IT TO LEAVE EARTH, MUST BE INCREASED TO MATCH MERCURY'S SPEED ON ITS ORBIT AROUND THE SUN OF 30 MILES PER SECOND.



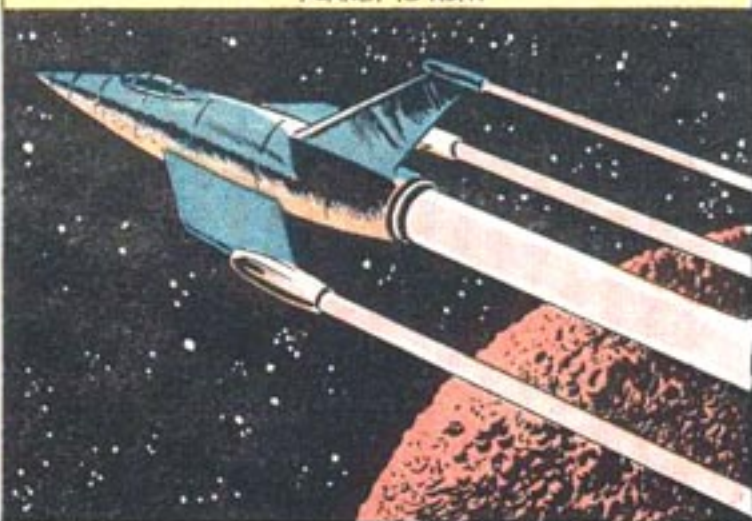
ALSO, SINCE MERCURY KEEPS ONE SIDE CONSTANTLY FACING THE SUN, THAT SIDE HAS A TEMPERATURE OF APPROXIMATELY 600 DEGREES FAHRENHEIT, WHILE THE OTHER SIDE IS ABSOLUTE ZERO. WE MUST LAND ON A NARROW "TWILIGHT" ZONE BETWEEN THE TWO (A STRIP ABOUT TWENTY MILES WIDE).



TINY MERCURY (ABOUT 3100 MILES IN DIAMETER) HAS NO ATMOSPHERE, HAS A VERY LOW GRAVITY (0.3), AND HAS NO MOONS. UNQUESTIONABLY NO LIFE EXISTS ON IT. WE MAY, HOWEVER, DISCOVER VALUABLE MINERAL DEPOSITS THERE. IF NOT, OUR FIRST TRIP FOR SCIENTIFIC EXPLORATION WILL PROBABLY BE OUR ONLY ONE.



LEAVING MERCURY IN OUR SPACESHIP WILL BE EASY. OUR ESCAPE VELOCITY WILL BE BUT 2.4 MILES PER SECOND. MERCURY'S YEAR IS ONLY 88 DAYS, ITS DAILY ROTATION, 88 DAYS ALSO. ALL IN ALL, MERCURY WILL BE A RATHER UNCOMFORTABLE PLANET TO VISIT.



SPACE CONQUERORS!

WE VISIT THE PLANET
VENUS

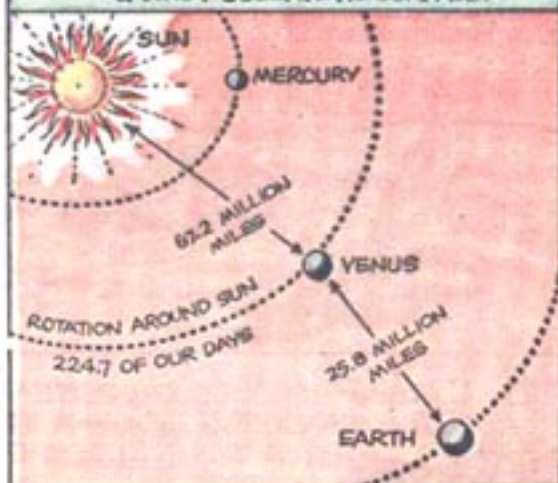


BY AL STENZEL

CARBON DIOXIDE ABSORBS AND RETAINS HEAT TO A HIGH DEGREE SO THAT THE SURFACE OF VENUS MUST BE EXTREMELY HOT. THE ABSENCE OF WATER VAPOR IN ITS ATMOSPHERE LEADS US TO ASSUME THAT VENUS HAS A HOT, ARID, DESERT-LIKE SURFACE, BARE OF VEGETATION.



VENUS HAS A DIAMETER OF 7600 MILES, ONLY 200 MILES LESS THAN EARTH'S, YET ITS MASS IS ONLY 80% THAT OF OUR EARTH. IT HAS A DENSE ATMOSPHERE WHICH REFLECTS THE SUN'S RAYS SO BRIGHTLY THAT WE CANNOT OBSERVE ITS SURFACE.



IN 1913, A NUMBER OF OBSERVERS NOTED A DEFINITE OUTCROPPING OF SOMETHING ON VENUS THROUGH AN UNUSUAL BREAK IN ITS CLOUD MANTLE.



SOME EXPERTS SAID IT WAS A 40-MILE HIGH MOUNTAIN, OTHERS, THAT IT WAS A GIGANTIC VOLCANIC EXPLOSION ON ITS SURFACE. IN JUNE, 1927, A DARK MARKING WAS PHOTOGRAPHED FROM THE MOUNT WILSON OBSERVATORY.

ANY SPECULATION ABOUT CONDITIONS ON VENUS IS PURE GUESSWORK. WE KNOW THERE ARE LARGE AMOUNTS OF CARBON DIOXIDE IN ITS ATMOSPHERE, BUT NO WATER VAPOR HAS YET BEEN NOTED.



HOWEVER, WE WILL PROBABLY NEVER KNOW WHAT THE SURFACE OF VENUS IS LIKE UNTIL THE FIRST SPACESHIP LANDS THERE AND REPORTS ON ITS DISCOVERIES.



WILL THEY FIND ANIMAL OR PLANT LIFE ON VENUS? WILL THEY FIND NOTHING BUT HOT, DRY DESOLATION OR WILL THEY FIND A LUSH, STEAMING JUNGLE TEEMING WITH AMPHIBIOUS REPTILES? WE CAN ONLY WAIT...AND GUESS!



SPACE CONQUERORS!



AN INTERPLANETARY TRIP
TO THE RED PLANET

MARS

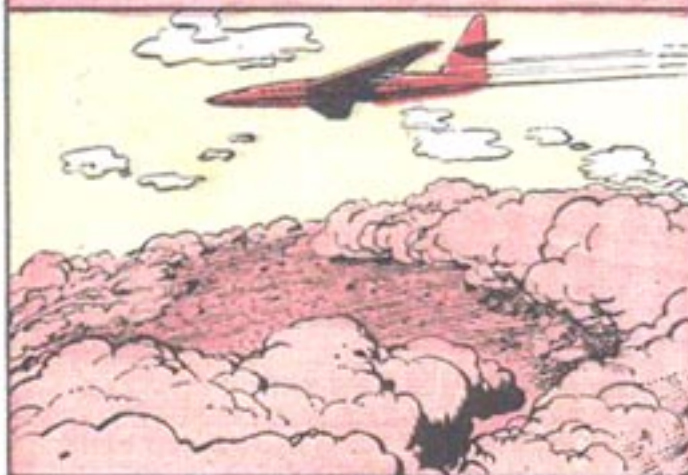
BY AL STENZEL

BECAUSE OF ITS RED COLOR, THE ANCIENTS NAMED MARS AFTER THE GOD OF WAR.

IT MIGHT BETTER BE NAMED THE "ROMANTIC" PLANET, CONSIDERING THE MANY FANCIFUL STORIES THAT HAVE BEEN WRITTEN ABOUT IT... ALL THE WAY FROM HIGHLY CIVILIZED SUPER-MEN TO FOUR-ARMED MONSTERS THAT INVADE EARTH!



AS OUR SPACESHIP APPROACHES MARS, WE FIND THE RED PLANET'S ATMOSPHERIC "BLANKET" ONLY ABOUT FIFTY MILES IN DEPTH. WE CIRCLE THE PLANET, SLOWING DOWN TO LAND AND OBSERVE VAST, ARID DESERT PLAINS STRETCHING INTO THE DISTANCE.



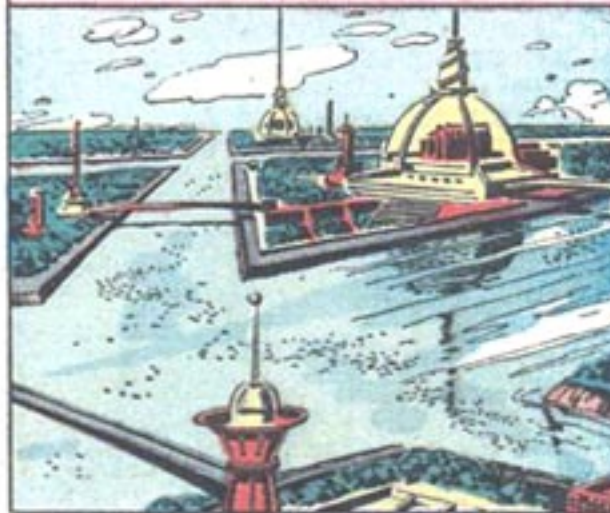
WE DON'T SEE ANY REAL MOUNTAINS. THE HIGHEST HILLS RISE NO MORE THAN TWO THOUSAND FEET. THE TEMPERATURE ALONG THE EQUATOR DOES NOT RISE ABOVE 75 DEGREES F. (THE SUN IS 141,650,000 MILES DISTANT AT MARS' NEAREST APPROACH ALONG ITS ELLIPTICAL ORBIT). BUT NOW WE SEE THE MARTIAN "CANALS" THAT WERE FIRST DISCOVERED BY GIOVANNI SCHIAPARELLI IN 1877.



ARE THESE DARK LINES, APPROXIMATELY FIFTY MILES WIDE AND STRETCHING FOR HUNDREDS OF MILES STRAIGHT ACROSS THE DESERTS, INTERSECTING EACH OTHER AT INTERVALS, THE PRODUCT OF INTELLIGENT BEINGS WITH GREAT ENGINEERING SKILL, OR A FREAK, ACCIDENTAL, NATURAL PHENOMENA?



IF THEY ARE IRRIGATION DITCHES, ARE THERE MARTIAN CITIES AND VILLAGES WITHIN THE POSSIBLE BANDS OF VEGETATION LINING THOSE WATERWAYS?



WE SKIM OVER ONE OF MARS' POLAR CAPS. IT IS COVERED WITH SNOW BUT ONLY TO A DEPTH OF A FEW FEET, NOT LIKE EARTH'S ICE CAPS. BUT WE REALIZE THERE IS WATER ON MARS EVEN THOUGH THREE-FOURTHS OF ITS SURFACE IS DESERT.



MARS HAS TWO MOONS. ITS FARTHEST ONE, DEIMOS, IS ONLY ABOUT FIVE MILES IN DIAMETER. IT IS ABOUT 12,500 MILES AWAY AND CIRCLES THE PLANET EVERY THIRTY HOURS. FROM THE SURFACE OF MARS IT APPEARS ONLY AS A BRIGHT STAR.



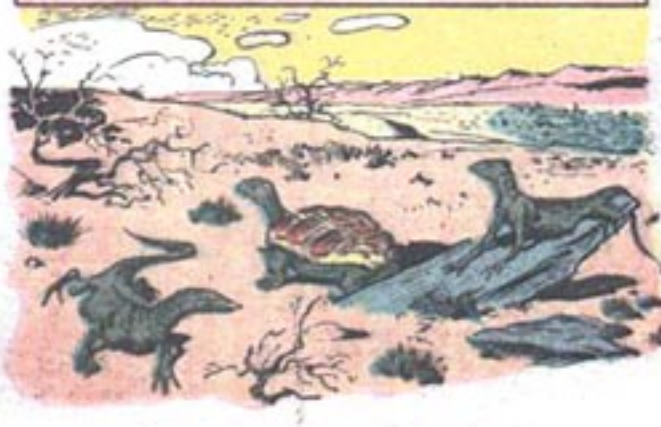
ITS NEARER ONE, PHOBOS, IS ABOUT TWICE THAT SIZE AND IS ONLY APPROXIMATELY 3700 MILES AWAY. IT CIRCLES MARS ONCE EVERY SEVEN AND A HALF HOURS. WE LAND THERE TO GET A GOOD VIEW OF THE WHOLE PLANET.



OUR RADIO MAN SENDS A MESSAGE TO EARTH WHICH TAKES FOUR MINUTES AND TWENTY SECONDS TO TRAVEL THE DISTANCE. (ROUGHLY 35,000,000 MILES AWAY AT ITS NEAREST APPROACH, 75,000,000 MILES AT ITS FARTHEST)



ALTHOUGH MARS IS MOSTLY DESERT, ITS TERRAIN IS NOT UNLIKE THE LANDSCAPE OF TIBET ON EARTH. IT IS DRY, RATHER FLAT, WITH A WIDE RANGE OF TEMPERATURE, ABLE TO SUSTAIN PLANT LIFE IF IT IS TOUGH ENOUGH. SO, WHERE THERE IS PLANT LIFE, THERE MAY BE ANIMAL LIFE.



MARS WAS CLOSEST TO EARTH EARLY IN SEPTEMBER OF THIS YEAR AND WILL AGAIN COME CLOSE TO EARTH IN AUGUST, 1971. IF, BY THEN, WE DO NOT HAVE SPACE-SHIPS THAT CAN MAKE THE LONG JOURNEY TO MARS, PERHAPS WE WILL HAVE ESTABLISHED A TELESCOPE STATION ON THE MOON THAT WILL REVEAL THE SECRETS OF OUR ROMANTIC NEIGHBOR, MARS.



SPACE CONQUERORS!

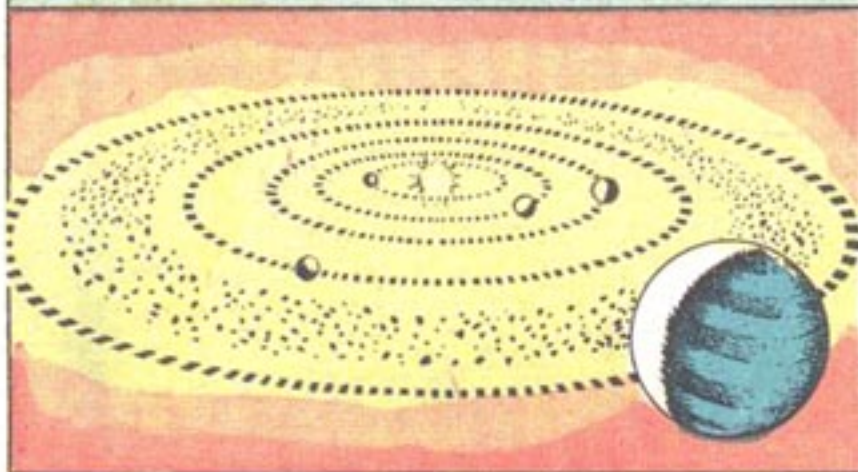
BY AL STENZEL

DERELICTS OF SPACE

BUT WHEN THE NEW "PLANET" WAS MEASURED IT WAS FOUND TO BE ONLY 480 MILES WIDE! SINCE IT WAS TOO SMALL TO BE LISTED AS A PLANET, IT WAS CALLED A "PLANETOID" OR AN "ASTEROID" WHICH MEANS "STARLIKE," AND IT WAS NAMED "CERES."



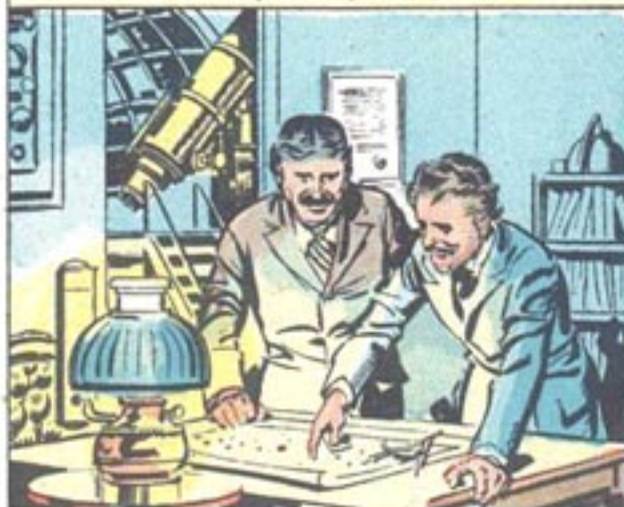
FOR MANY YEARS, ASTRONOMERS PUZZLED OVER THE BIG GAP (NEARLY 350 MILLION MILES) BETWEEN THE ORBIT OF MARS AND THE ORBIT OF JUPITER. ALL THE OTHER KNOWN PLANETS WERE SPACED AT FAIRLY REGULAR DISTANCES FROM EACH OTHER RELATIVE TO THEIR DISTANCE FROM THE SUN. WHY THEN THIS DISPARITY ONLY BETWEEN MARS AND JUPITER?



IT WAS NOT UNTIL JANUARY, 1801, THAT AN ASTRONOMER NAMED PIAZZI DISCOVERED A NEW "PLANET" IN THE GAP BETWEEN MARS AND JUPITER.



THIS DISCOVERY GREATLY EXCITED OTHER ASTRONOMERS AND THE SEARCH FOR MORE ASTEROIDS BEGAN IN EARNEST. WITHIN A FEW YEARS, THREE OTHERS WERE DISCOVERED, "PALLAS," "JUNO," AND "VESTA".



WHEN CAMERAS WERE ATTACHED TO TELESCOPES, DISCOVERING ASTEROIDS BECAME EASIER AND MORE AND MORE WERE CHARTED. TODAY THERE ARE ABOUT TWO THOUSAND KNOWN ASTEROIDS RANGING IN SIZE FROM CERES, THE LARGEST, 480 MILES ACROSS, TO SOME LESS THAN ONE MILE IN DIAMETER!



THERE ARE PROBABLY THOUSANDS MORE SO SMALL THEY CANNOT BE SEEN FROM EARTH. ALL ARE BARREN, WITHOUT AIR OR WATER...JUST CHUNKS OF JAGGED ROCKS EACH CIRCLING AROUND THE SUN ON ITS OWN REGULAR ORBIT.

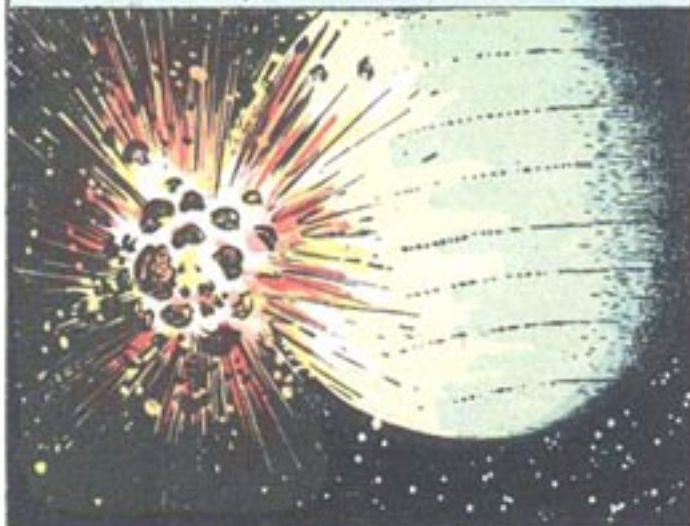
MOST OF THE ASTEROIDS FORM A BELT BETWEEN MARS AND JUPITER. SOME TAKE SIX YEARS TO CIRCLE AROUND THE SUN, SOME ONLY THREE. SOME COME QUITE CLOSE TO EARTH. HERMES, ONLY ONE MILE IN DIAMETER, HAS AN ORBIT THAT COULD BRING IT WITHIN 220,000 MILES OF EARTH!



THERE IS MUCH SPECULATION ABOUT THE ORIGIN OF THE ASTEROIDS. MOST ASTRONOMERS BELIEVE THEY WERE ONCE PART OF A SINGLE PLANET THAT WAS PULLED APART SOME WAY OR EXPLODED FROM SOME UNKNOWN CAUSE.



PERHAPS THE UNKNOWN PLANET CAME TOO CLOSE TO GIANT JUPITER AND WAS TORN APART BY JUPITER'S ENORMOUS GRAVITATIONAL PULL, SOME OF IT FALLING ONTO JUPITER, THE REST EXPLODING INTO SPACE.



OR, WAS THIS CATAclysmic UPHEAVAL CAUSED BY INTELLIGENT BEINGS ON THAT PLANET? OUR SCIENTISTS WARN THAT A COBALT BOMB, THE NEXT STEP AFTER THE HYDROGEN BOMB, WOULD BLOW UP THE EARTH IF EVER EXPLODED!

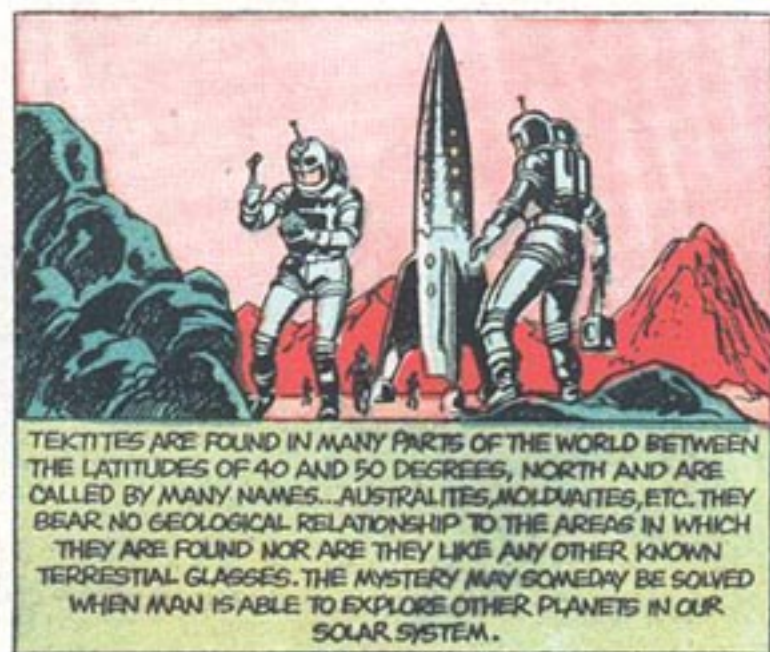
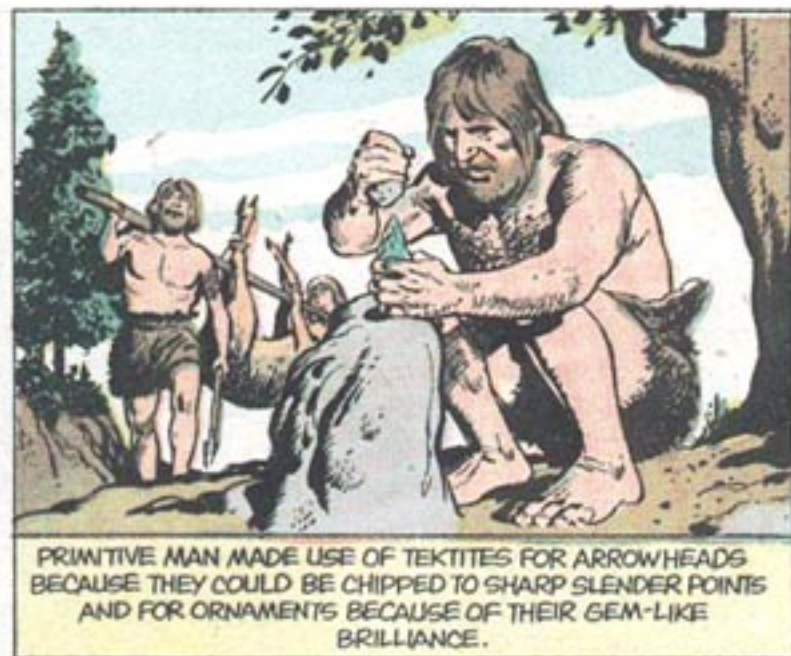


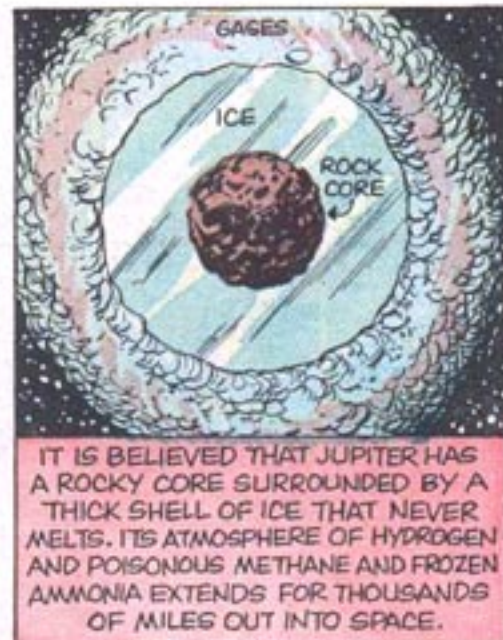
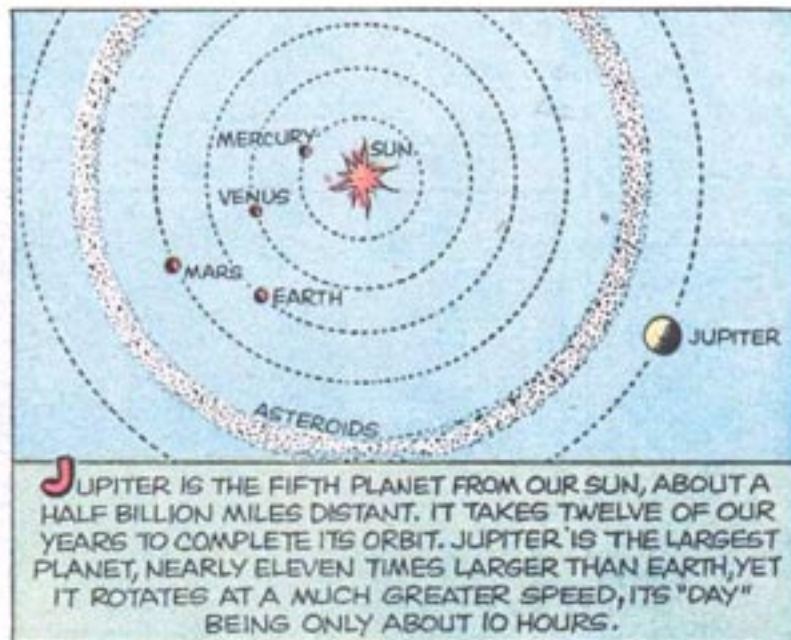
WHATEVER THE CAUSE, ASTEROIDS WILL BE A NAVIGATIONAL HAZARD TO SPACE TRAVEL. ALTHOUGH GREAT DISTANCES SEPARATE THE ONES WE HAVE BEEN ABLE TO OBSERVE, WE DO NOT KNOW HOW MUCH SMALL DEBRIS IS FLYING WITHIN THAT BELT.





BY AL STENZEL





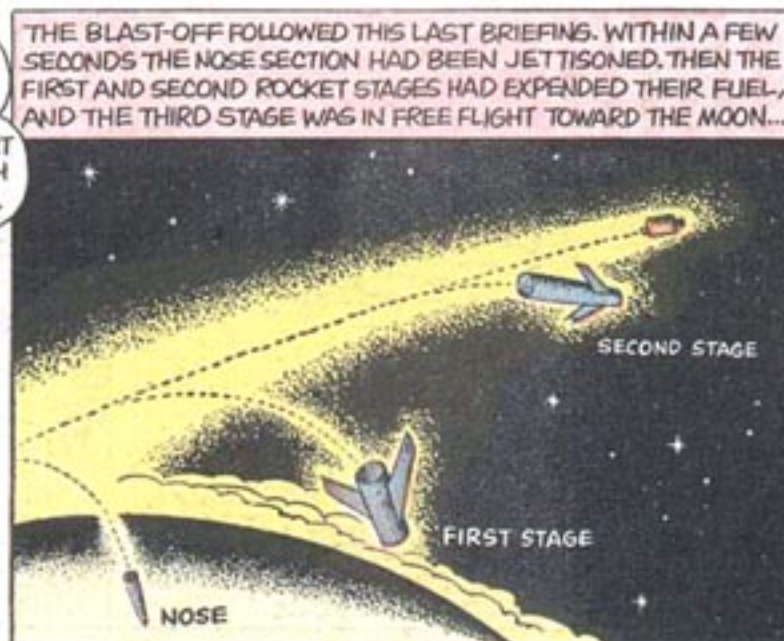
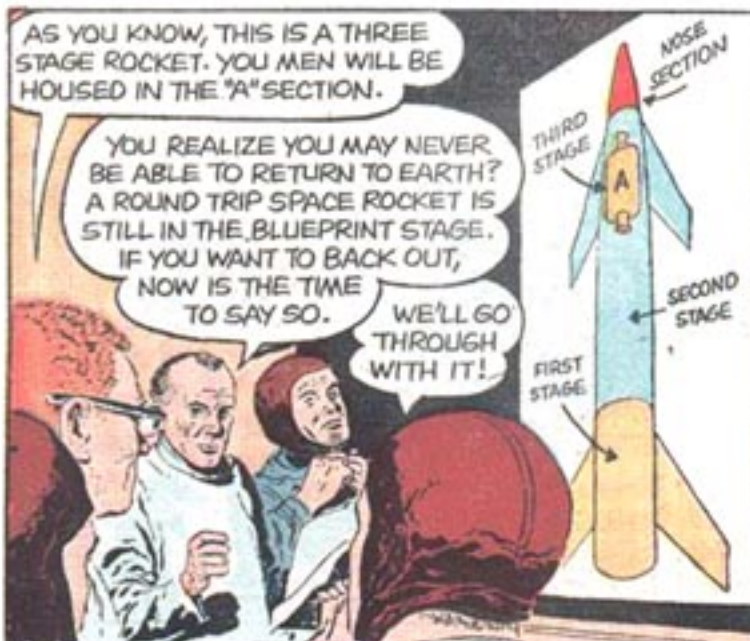
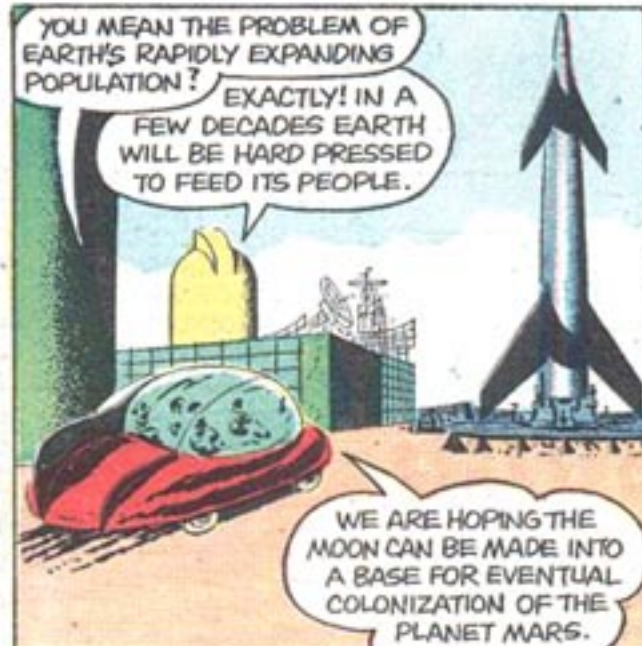
THESE POISON CLOUDS APPEAR AS BANDS OF DIFFERENT COLORS WHEN SEEN THROUGH A TELESCOPE. THE MYSTERIOUS "RED SPOT" ON JUPITER WAS FIRST OBSERVED IN 1878. IT HAS BEEN GROWING FAINTER EACH YEAR BUT STILL CAN BE SEEN. ITS CAUSE IS UNKNOWN. ALL WE DO KNOW IS THAT IT IS SEVERAL TIMES THE EARTH'S WIDTH AND HAS CHANGED POSITION ON JUPITER'S SURFACE SINCE BEING FIRST OBSERVED. IT MAY BE HOT GASES FROM VOLCANOES BENEATH THE ICE AND FROZEN HAZE.



SPACE CONQUERORS!

By AL STENZEL

THE FIRST CREW-CARRYING ROCKET SHIP IS READY TO BE LAUNCHED; ITS DESTINATION...THE MOON! YEARS OF RESEARCH, THOUSANDS OF TEST ROCKETS AND BILLIONS OF DOLLARS HAVE BEEN EXPENDED TO MAKE THIS FIRST ATTEMPT POSSIBLE. THE FATE OF ALL MANKIND MAY WELL DEPEND ON ITS SUCCESS. THE DATE IS JULY 4th, 2057!



IN ABOUT TEN HOURS THE ROCKET SHIP HAD REACHED THE MOON, APPROXIMATELY 237,000 MILES FROM EARTH. THE NOSE ROCKETS SLOWED THE FALL AND THE FIRST HUMANS LANDED ON LUNA!



WHILE BACK ON EARTH...

THEY HAVE LANDED! AMERICA WILL NOW PROCLAIM THE MOON AS HER TERRITORY. SO FAR ALL OUR ATTEMPTS TO SABOTAGE THIS PROJECT HAVE FAILED. WE MUST PREVENT A MOON BASE FROM BEING ESTABLISHED UNTIL WE ARE READY TO DO IT OURSELVES.



I HAVE A PLAN, EXCELLENCY THAT SHOULD SUCCEED! BUT FIRST WE MUST TRY AGAIN TO PLANT A SPY IN THE SUPPLY BASE.

THEY WILL NOT BE SO STRICT ABOUT SECURITY NOW.

A FEW WEEKS LATER ON THE MOON BASE...

GUIDE HER IN CAREFULLY! WE NEED THESE SUPPLIES.



RIGHT! I DON'T KNOW WHY THE LAST TWO CRASHED. MUST'VE BEEN A FAULTY RECEIVER.

WELL! WHAT DO YOU KNOW...THEY SENT ALONG THREE NEW ELECTRIC RAZORS. THEY MUST EXPECT TO HAVE THAT RETURN ROCKET SHIP READY SOONER THAN THEY THOUGHT.



ELECTRIC RAZORS? THAT'S STRANGE. THEY KNOW OUR ORIGINAL ONES WILL LAST FOR YEARS.

WAIT A SEC... LET ME LOOK AT THOSE!

LET'S FIRST ATTACH THESE TO A LONG CORD AND TRY 'EM AWAY FROM OUR PLASTIC HUT. I HAVE A HUNCH.

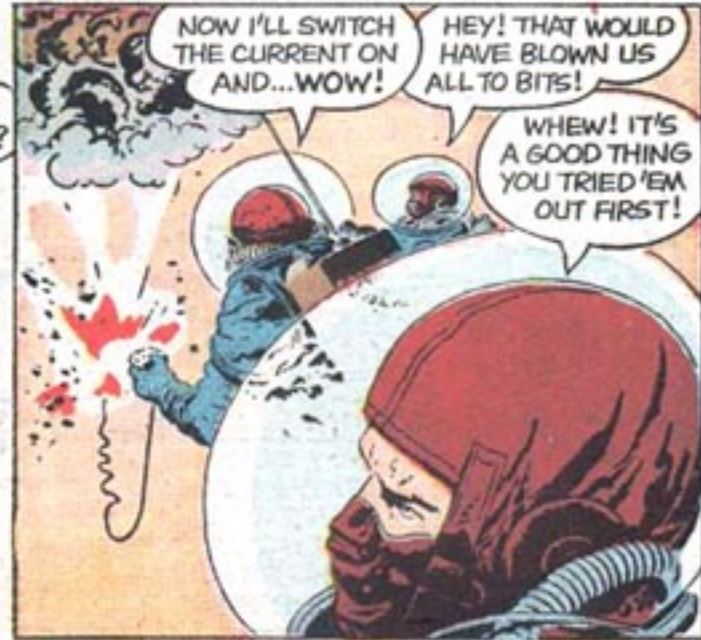


WHY ALL THE PRECAUTIONS?

NOW I'LL SWITCH THE CURRENT ON AND...WOW!

HEY! THAT WOULD HAVE BLOWN US ALL TO BITS!

WHEW! IT'S A GOOD THING YOU TRIED 'EM OUT FIRST!



SPACE CONQUERORS!

by AL STENZEL

IN THE YEAR 2057, THE FIRST SUCCESSFUL LANDING ON THE MOON WAS MADE. THE THREE PIONEERS SET UP THEIR PLASTIC AIRDOMES, INSTALLED THEIR ATOMIC ENGINES FOR OXYGEN AND POWER AND WERE READY TO BEGIN THEIR EXPLORATIONS.



"THAT'S RIGHT. MANY EARTH SCIENTISTS THEORIZE THE EARTH WHEN FIRST FORMED WAS FLAT AT THE POLES BECAUSE OF ITS SEMI-LIQUID, PLASTIC CONDITION..."



"THEN IT GRADUALLY BECAME DUMBELL-SHAPED WITH UNEQUAL WEIGHTS ON THE ENDS..."



"EVENTUALLY THOSE ENDS SEPARATED, THE SMALLER END BECOMING EARTH'S MOON WHICH SLOWLY MOVED FARTHER AND FARTHER AWAY FROM THE EARTH."



THE TWO SPACE-SUITED MEN WERE BUSILY CHIPPING OFF ROCK SAMPLES AND STOWING THE SPECIMENS IN THEIR SACKS...WHEN...

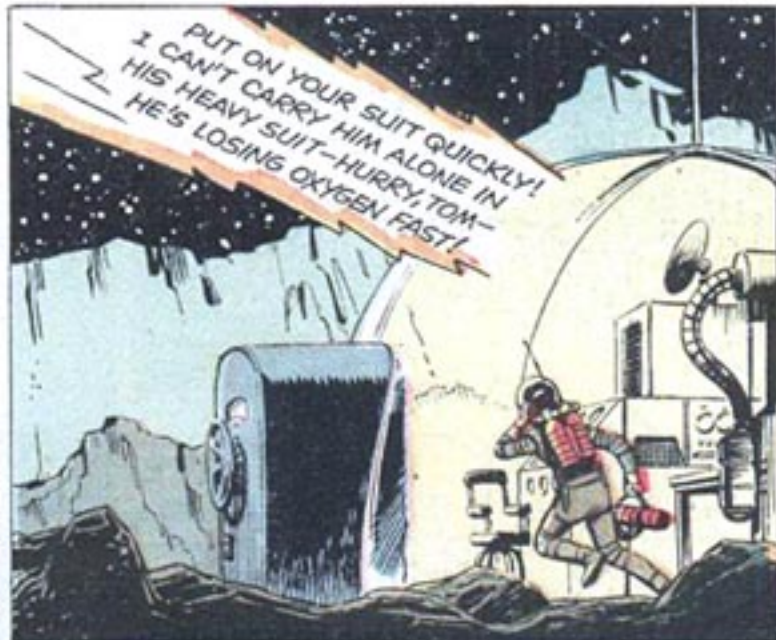
BILL! BILL! THIS YELLOW ROCK LOOKS A LOT LIKE URANIUM ORE! BILL - CAN YOU HEAR ME? HEY! SOMETHING'S WRONG...



HIS OXYGEN LINE WAS LEAKING! HE'S PASSED OUT COLD! BASE-BASE! TOM - MAYDAY! MAYDAY!



PUT ON YOUR SUIT QUICKLY! I CAN'T CARRY HIM ALONE IN HIS HEAVY SUIT - HURRY, TOM - HE'S LOSING OXYGEN FAST!



MAN! YOU'RE JUST IN TIME! HE CAN'T LAST MUCH LONGER!

I BROUGHT A BOTTLE OF OXYGEN! DETACH ONE HOSE AND WE'LL FEED HIM THIS!



THAT DID IT! HE'S COMING AROUND... WHEW! THAT WAS CLOSE! HE JUST PASSED OUT. I ONLY NOTICED IT BY A LUCKY CHANCE.

HE'S TOUGH - HE'LL BE ALL RIGHT. FEELING BETTER, BILL?



I'M OKAY. JUST FELT DROWSY ALL OF A SUDDEN.

A SHORT WHILE LATER...

HERE COMES THE SUPPLY ROCKET. RIGHT ON SCHEDULE. FEEL UP TO GUIDING IT IN, BILL?

SURE! GUESS WE HAVE TO EXPECT AN ACCIDENT NOW AND THEN. JUST PROVES HOW CAREFUL WE MUST BE.

WE'LL BE CAREFUL LANDING THIS ROCKET. HOPE THE TRACTOR IS IN IT.



SPACE CONQUERORS!



A THREE-MAN CREW HAS BEEN ROCKETED TO THE MOON TO ESTABLISH A BASE FOR FUTURE COLONIZATION. SUPPLIES ARE SENT TO THEM BY ROCKET FROM EARTH. THEY HAVE JUST RECEIVED A SEALED-CABIN, ATOMIC POWERED TRACTOR.

SAY! THIS IS A BEAUTY! WE CAN REALLY GET PLACES WITH THIS BABY! BUNKS, GALLEY... WE CAN LIVE IN THIS LAND YACHT FOR MONTHS!

THAT'S SO WE CAN HEAD FOR THE OTHER SIDE OF THE MOON...THE SIDE THAT'S NEVER BEEN SEEN FROM EARTH.



THIS EARTH-SIDE HALF OF THE MOON IS TOO HOT DURING THE DAY AND TOO COLD DURING THE NIGHT FOR A PRACTICAL BASE LOCATION.

SO MAYBE THE "TWILIGHT" ZONE MIGHT BE MORE COMFORTABLE EH?



FOR A WEEK THE TRACTOR ROCKED AND SLITHERED OVER THE MOON'S CRATER-PITTED, MOUNTAINOUS SURFACE. THEY FOLLOWED THE WINDING VALLEYS BETWEEN HIGH CLIFFS AND SKIRTED AROUND DEEP, YAWNING CRATERS.

WOW! LOOK AT THAT HOLE! IT MUST BE THOUSANDS OF FEET DEEP!

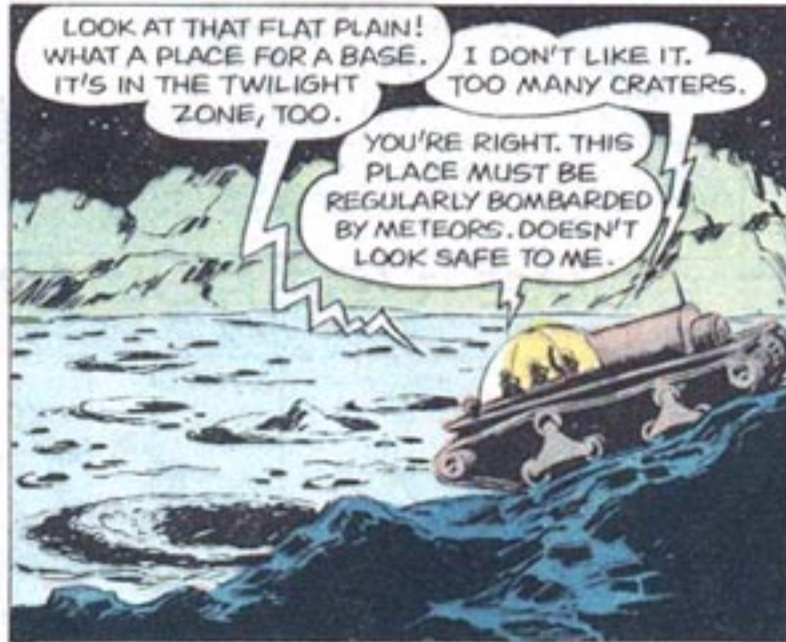
I'D HATE TO HAVE BEEN AROUND WHEN THAT DIMPLE WAS MADE!



LOOK AT THAT FLAT PLAIN! WHAT A PLACE FOR A BASE. IT'S IN THE TWILIGHT ZONE, TOO.

I DON'T LIKE IT. TOO MANY CRATERS.

YOU'RE RIGHT. THIS PLACE MUST BE REGULARLY BOMBARDED BY METEORS. DOESN'T LOOK SAFE TO ME.



I'VE BEEN THINKING...WHY WOULDN'T IT BE SMART TO BUILD A BASE UNDERGROUND? ONE OF THESE DEEP CRATERS COULD BE THE ENTRANCE AND...

SAY! YOU'VE GOT SOMETHING THERE! IT WOULD AVOID ANY METEOR DANGER.



IT'S WORTH INVESTIGATING. BUT LET'S EAT FIRST!



SPACE CONQUERORS!

by AL STENZEL

THE THREE-MAN EXPLORATION CREW ON THE MOON HAS NOT BEEN ABLE AS YET TO FIND A SUITABLE PLACE TO ESTABLISH A PERMANENT MOON-BASE. IN THEIR TEMPORARY PLASTIC HUT THEY DISCUSS THE PROBLEM...

ACCORDING TO THE UNITED NATION'S AGREEMENT ALLOWING OUR COUNTRY TO CLAIM THE MOON AS ITS TERRITORY, WE MUST ESTABLISH A PERMANENT BASE WITHIN A YEAR FROM OUR LANDING.

AND FOUR MONTHS HAVE ALREADY GONE BY WITH NO RESULT!

THEY CAN'T SAY WE HAVEN'T TRIED!

JUST TRYING ISN'T GOOD ENOUGH. WE'VE GOT TO BEGIN SHOWING RESULTS!

RIGHT! BEFORE SOME OTHER COUNTRY GETS THE JUMP ON US.

I STILL THINK AN UNDERGROUND BASE IS THE ANSWER TO THE HEAT AND COLD PROBLEM... ALSO THE POSSIBILITY OF METEORS HITTING THE SURFACE.

I AGREE. WE'LL GIVE IT ANOTHER TRY...IN THE OPPOSITE DIRECTION.

LET'S EAT FIRST.

ONCE AGAIN THEY STARTED OUT IN THEIR ATOMIC-POWERED TRACTOR.

HEY! LOOK AT THE SIZE OF THAT CRATER! MUST BE FIFTY MILES ACROSS.

AND THE SIDES AREN'T VERY STEEP. LET'S LOOK IT OVER.

KEEP GOING. THIS LOOKS PROMISING. THE TREADS ARE GRIPPING ENOUGH TO PROVE WE CAN GET OUT AGAIN.

IT'S A LONG WAY DOWN! LET'S HOPE WE DON'T RUN INTO A SOFT PIT.

IF IT'S AS GOOD A ROADBED AS THIS ON THE BOTTOM, WE'VE FOUND OUR GOAL.

ABOUT AN HOUR LATER THEY HAD DESCENDED OVER FIVE THOUSAND FEET AND HAD REACHED THE FLOOR OF THE CONE-SHAPED CRATER.

LOOK! WHATEVER HIT TO MAKE THIS CRATER LEFT A CONE STANDING IN THE MIDDLE OF IT!

JUST AS THOUGH YOU DROPPED A STONE IN A POOL OF WET PLASTER!

GOSH! THIS CRACK IN THE CONE SEEMS TO LEAD STILL FARTHER DOWN!

LET'S GET LIGHTS AND SEE WHERE IT GOES.

THEY FOLLOWED THE SMOOTH, SLOPING CRACK DOWN FOR AT LEAST TWO MILES BELOW THE SURFACE OF THE CRATER. THEY CAME TO A SHARP BEND...AND SUDDENLY...

IT'S A SUBTERRANEAN CAVERN!

AND LOOK! STALACTITES!

AND THAT LOOKS LIKE ICE! ON THE MOON? IMPOSSIBLE!

IT'S ICE ALL RIGHT—PROBABLY MILLIONS OF YEARS OLD. THE MOON UNDOUBTEDLY ONCE HAD AN ATMOSPHERE BUT LOST IT ON ACCOUNT OF ITS LOW GRAVITY.

AND THIS ICE WAS FORMED AT THAT TIME!

DO YOU REALIZE WHAT THIS MEANS?

IT MEANS THAT THERE STILL IS OXYGEN LOCKED IN THIS AGE-OLD ICE AND THESE ANCIENT STALACTITES. THERE MUST ALSO BE ICE BURIED ELSEWHERE FAR BELOW THE MOON'S SURFACE. MAN CAN RELEASE IT FOR HIS USE.

WE'VE FOUND THE PLACE FOR OUR BASE AT LAST! LET'S SET UP OUR HQ HERE!

WE'LL ENLARGE THE CRACK AND DRIVE THE TRACTOR DOWN.

A PERMANENT BASE CAN BE BUILT IN THAT CAVERN WITH AN AIR-LOCK AT THE ENTRANCE.

THERE MUST BE MORE CAVERNS LIKE THAT ONE, EUREKA! SUCCESS AT LAST!

WHAT A SENSATION THIS NEWS WILL MAKE ON EARTH!

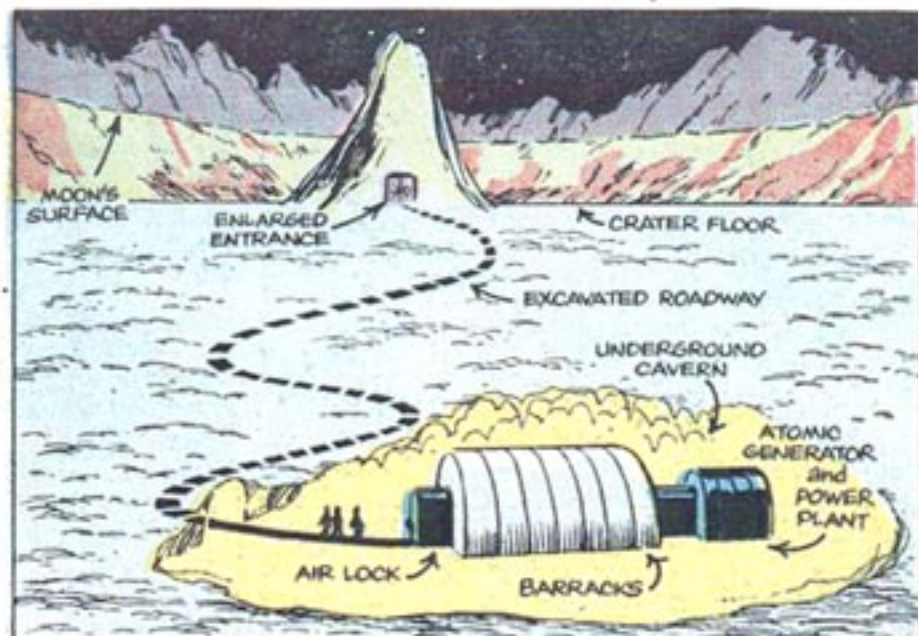
SPACE CONQUERORS!

by AL STENZEL

HAVING DISCOVERED A DEEP CAVE BENEATH ONE OF THE MOON'S CRATERS, THE THREE EXPLORERS FROM EARTH BEGAN SETTING UP A PERMANENT BASE IN THE LARGEST OF THE CHAMBERS.



WITH PREFABRICATED PARTS ROCKETED FROM EARTH, THE MEN BUILT AN AIR-TIGHT BARRACKS WITHIN THE CAVERN AND SET UP THE ATOMIC MACHINE TO EXTRACT OXYGEN FROM THE ICE. EVERYTHING WAS READY TO RECEIVE THE FIRST CONTINGENT OF THE PROPOSED MOON COLONY AS SOON AS EARTH HAD DEVELOPED A ROCKET SHIP ABLE TO REACH THE MOON AND RETURN TO EARTH.



WELL, THAT'S IT, FELLOWS. THE TOP BRASS SENT A MESSAGE OF CONGRATULATIONS AND SAID TO KEEP OUR CHINS UP—KEEP BUSY AND WAIT. IT'S GOING TO BE A WHILE BEFORE THEY'LL BE ABLE TO SEND THE COLONY HERE—THEY ALSO...

HEY! WHAT'S HAPPENING?



WITHOUT WARNING THE BARRACKS IS SUDDENLY SHAKEN AS THOUGH BY A GIANT HAND...A MOONQUAKE!

THE GENERATOR! IF THAT GETS LOOSE AND HITS SOME FISSIONABLE MATERIAL!! WE'VE GOT TO SHUT IT OFF!



THE QUAKE, PROBABLY CAUSED BY A ROCK FAULT DEEP IN THE MOON'S INTERIOR, LASTED ONLY A FEW MINUTES BUT DID MUCH DAMAGE TO THE BARRACKS.

THE DOOR TO THE POWER PLANT IS JAMMED!

TRY HITTING IT. IT'S GOT TO OPEN!

OUR AIR'S ESCAPING! WE'LL SUFFOCATE!



THAT DID IT! GET TO THE SWITCH QUICK!

WAIT! WE'LL NEED OUR HELMETS. THE AIR'S NEARLY GONE!

CAN'T WAIT! IF THAT ATOMIC MOTOR STARTS A CHAIN REACTION, WE WON'T NEED AIR!



HE'S GOT IT, BUT HE CAN'T LAST WITHOUT HIS HELMET!

QUICK! FASTEN YOURS AND HELP ME SLIP HIS ON.

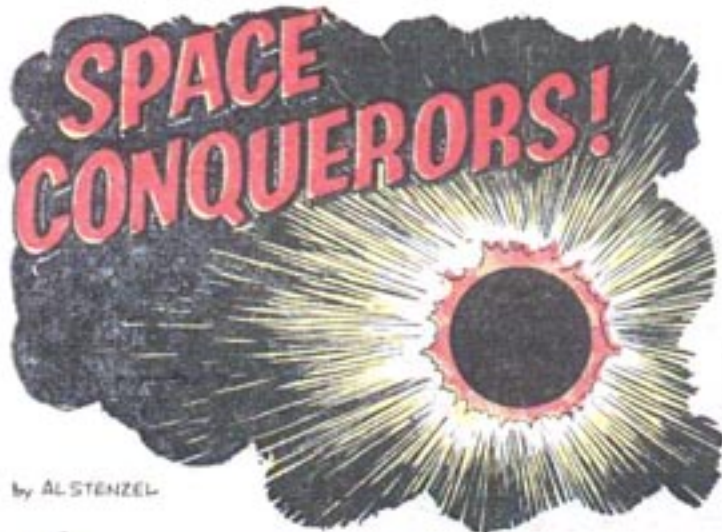


WELL, WE'RE NOT AIR TIGHT ANY LONGER. IT'S BACK TO THE OLD HELMETS AGAIN.

IMAGINE A MOONQUAKE! NEVER KNEW THEY HAD 'EM. THOUGHT THIS WAS A DEAD HUNK OF ROCK!

GUESS THERE'S A LOT WE DON'T KNOW ABOUT THIS PLACE! BUT WE'RE LEARNING!



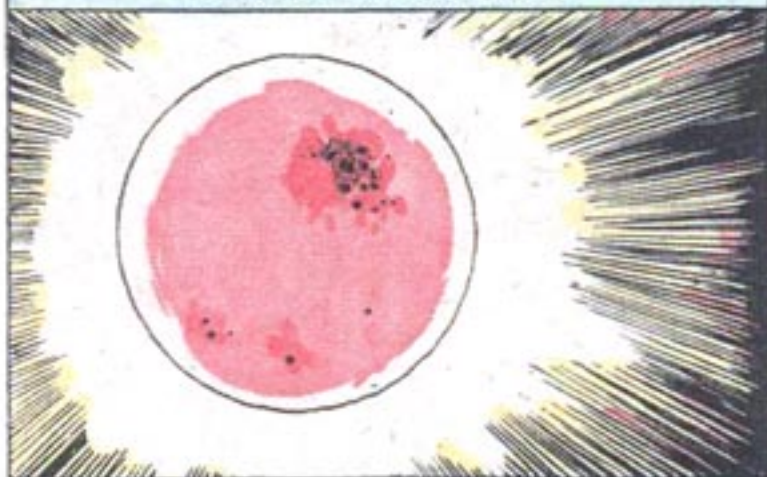


by AL STENZEL

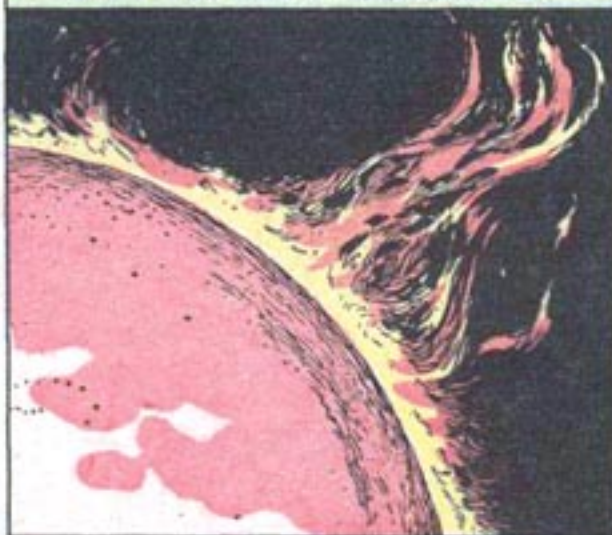
THREE EXPLORERS ON THE MOON ARE CHECKING THE DAMAGE TO THEIR QUARTERS CAUSED BY A SEVERE MOONQUAKE.



UNKNOWN TO THE MOON EXPLORERS THERE HAD BEEN A TREMENDOUS SERIES OF SUNSPOTS JUST A FEW DAYS BEFORE SHOOTING OFF ELECTRONS THAT NOW ARE SERIOUSLY AFFECTING THE EXPLORERS' REMOTE CONTROL RADIO...



THE SWIRLING STREAMERS OF FIERY GASES SHOOT OUT FROM THE SUN THOUSANDS OF MILES FROM ITS GLOWING SURFACE.





SUN SPOTS CAUSED SUCH SEVERE ELECTRICAL DISTURBANCES THAT THE THREE MOON EXPLORERS COULD NOT PREVENT THE EARTH SUPPLY ROCKET FROM CRASHING.



AND WHEN THE MEAL WAS SERVED...

BOY! THIS MUST BE REALLY SOMETHING—A COVERED DISH, NO LESS!

JUST GET SET FOR A REAL SURPRISE!

WHAT IS IT? STEWED VITAMIN PILLS?



THERE IT IS, FELLOWS! EAT HEARTY!

Wow! FRESH VEGETABLES! I MUST BE DREAMING!

TOMATOES—GREEN BEANS AND PEAS! WHERE ON THE MOON DID YOU GET 'EM?



I GREW THEM IN MY GARDEN!

YOUR GARDEN? WHO ARE YOU KIDDING? HOW COULD YOU HAVE A GARDEN ON THIS BARREN HUNK OF ROCK?

NEVER MIND HOW—LET'S EAT AND THEN TALK ABOUT IT!



WHILE YOU GLUTTONS ARE SPOONING IN THOSE VEGETABLES I'LL TELL YOU MY SECRET—I GREW THOSE IN MY CHEMICAL GARDEN. THE STUFF I NEEDED WAS SENT TO ME ON ONE OF THE ROCKETS FROM EARTH. COME ON, I'LL SHOW YOU.



GROWING VEGETABLES IN CHEMICALS IS CALLED HYDROPONICS. YOU TAKE A METAL BOX, FILL IT PARTLY WITH SAND, SAWDUST OR PEAT MOSS, OR GRAVEL, PLANT YOUR SEEDS, ADD CHEMICALS AND WATCH 'EM GROW.



CHEMICALS NECESSARY TO PLANT GROWTH ARE CARBON, OXYGEN, HYDROGEN, NITROGEN, POTASSIUM, CALCIUM, MAGNESIUM, SULPHUR, PHOSPHORUS AND IRON. SMALL AMOUNTS OF BORON, ZINC, MANGANESE AND COPPER AS WELL AS A TINY BIT OF MOLYBDENUM SHOULD ALSO BE ADDED.

I CAN'T GET OVER IT—OUR OWN FRESH FRUIT AND VEGETABLES RIGHT HERE ON THE MOON AND WE NEVER KNEW YOU WERE DOING IT!

IT'S ONE ANSWER TO THE FOOD PROBLEM... PARTICULARLY ON DESOLATE PLACES LIKE THIS. SURE BEATS EATING FOOD CAPSULES DAY AFTER DAY.

NOW WE CAN TELL EARTH WE'RE READY TO WELCOME COLONISTS ON THE MOON!



SPACE CONQUERORS!

by AL STENZEL

A FULL YEAR HAS PASSED SINCE THE THREE EXPLORERS LANDED ON THE MOON, VIA A ONE-WAY ROCKET FROM EARTH. OTHER ROCKETS FROM EARTH HAVE BEEN SENT TO THEM REGULARLY WITH NECESSARY SUPPLIES AND AS MANY EXTRA COMFORTS AS POSSIBLE, BUT THE LONG DELAY IN PERFECTING A SPACESHIP CAPABLE OF LANDING ON THE MOON AND RETURNING TO EARTH IS A GROWING SOURCE OF DISAPPOINTMENT TO THEM...

SITTING AROUND THE TABLE IN THEIR UNDERGROUND BASE, ONE OF THE MEN BRINGS UP THE SUBJECT, WHICH UNTIL NOW, HAS BEEN AN UNSPOKEN WORRY TO THEM ALL.

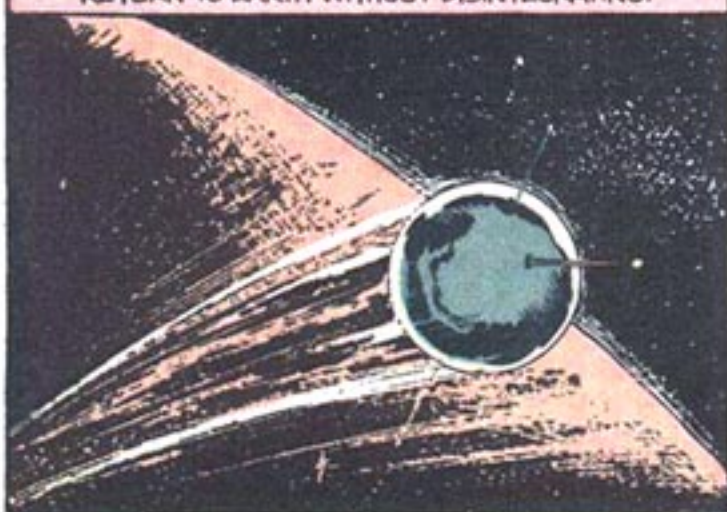
LET'S FACE IT, FELLOWS! WE'RE CONDEMNED TO SPEND THE REST OF OUR LIVES ON THIS BARREN HUNK OF ROCK. THE CHANCES OF EARTH BUILDING A TWO-WAY SPACESHIP ARE NIL!

YOU'RE RIGHT, BILL. IT LOOKS PRETTY HOPELESS. BUT WE KNEW THAT WHEN WE VOLUNTEERED FOR THIS EXPEDITION.

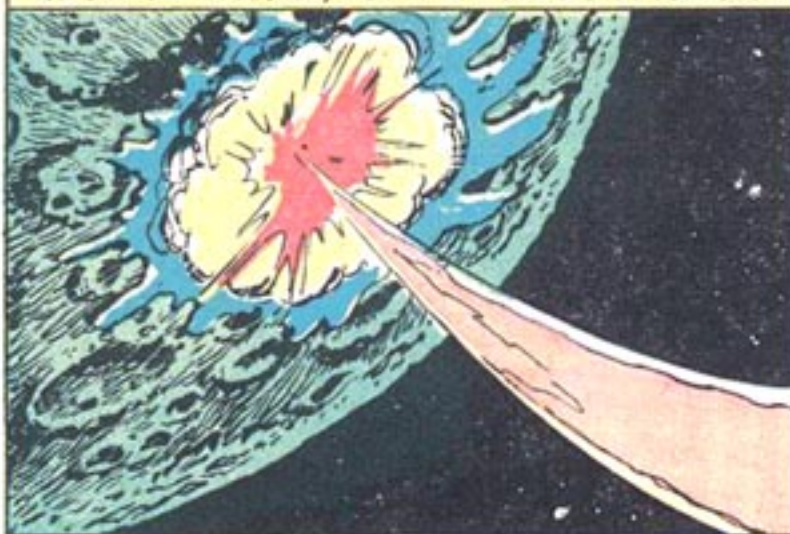
THE PROBLEM OF CONSTRUCTING A SHIP THAT CAN RETURN SAFELY TO EARTH IS A TOUGH ONE. SHOOTING A ROCKET TO THE MOON WAS COMPARATIVELY EASY. GETTING ONE BACK TO EARTH AGAIN IS THE HITCH. WAY BACK IN 1957, EARTH SCIENTISTS WERE ABLE TO SEND UP MAN-MADE MOONS THAT CIRCLED THE EARTH IN REGULAR ORBITS.



"THESE EARTH SATELLITES, FILLED WITH RECORDING INSTRUMENTS, GAVE THE SCIENTISTS MUCH IMPORTANT DATA ABOUT OUTER SPACE. AFTER MANY TESTS THEY WERE ABLE TO SEND UP SATELLITES THAT COULD RETURN TO EARTH WITHOUT DISINTEGRATING."



"NOT LONG AFTER THOSE FIRST EXPERIMENTS A ROCKET WAS SUCCESSFULLY SHOT THAT ACTUALLY LANDED ON THE MOON. ALL IT DID WAS SPLASH A BIG PATCH OF BLUE DYE ON THE MOON'S SURFACE, BUT IT WAS A BIG STEP FORWARD."

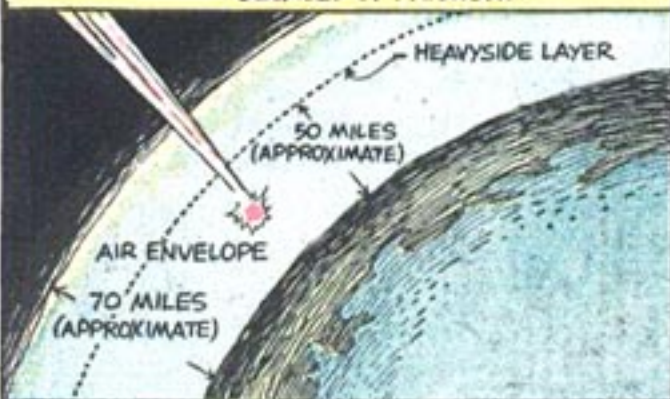


GETTING A MANNED ROCKET SAFELY BACK TO EARTH IS STILL THE BIG PROBLEM, ISN'T IT?

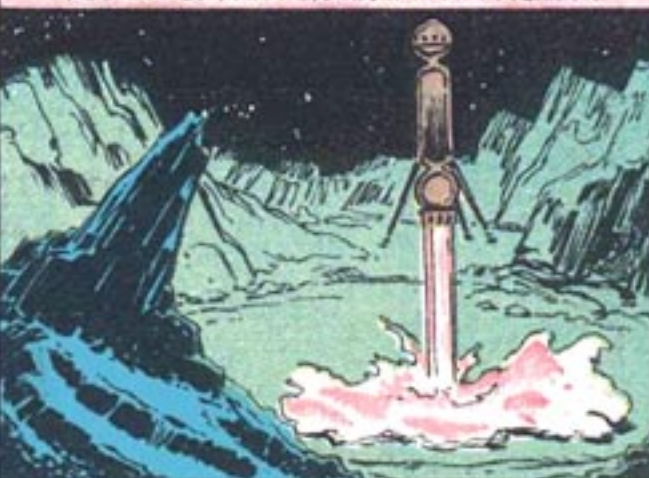
YES—MOSTLY BECAUSE OF EARTH'S ATMOSPHERE, THAT ENVELOPE OF AIR THAT SURROUNDS THE GLOBE.



"TO ESCAPE FROM EARTH A ROCKET MUST ATTAIN A SPEED OF AT LEAST 25,000 MILES PER HOUR. TO ESCAPE FROM THE MOON A ROCKET NEEDS A SPEED OF ONLY 5,200 MILES PER HOUR. BUT, AS THE ROCKET NEARS THE EARTH, GRAVITY INCREASES THIS SPEED. UNLESS SOME POWERFUL BRAKING FORCE IS APPLIED A VEHICLE ENTERING EARTH'S ATMOSPHERE AT THESE SPEEDS WOULD QUICKLY BURN UP LIKE A METEOR BECAUSE OF FRICTION."



"THIS SITUATION DOESN'T EXIST ON THE MOON. HERE, THE AIR RESISTANCE IS PRACTICALLY ZERO. AND ALTHOUGH THE SPEED OF THE ROCKET COMING TO THE MOON IS MUCH GREATER IT CAN BE SLOWED BY ROCKET BLASTS AND LANDED EASILY. THE BIG PROBLEM OF FRICTION-HEAT IS NOT PRESENT."



WITH ENOUGH FUEL TO CONTINUE ROCKET BLASTING UNTIL THE EARTH-BOUND SHIP IS SLOWED ENOUGH TO ENTER THE EARTH'S ATMOSPHERE, IT WOULD BE SIMPLE.

AND THAT WOULD TAKE A MIGHTY BIG ROCKET-SHIP!



A FEW DAYS LATER WHILE COLLECTING ROCK SPECIMENS...



SPACE CONQUERORS!

by AL STENZEL



THE THREE MOON EXPLORERS CONTINUE THEIR PROSPECTING FOR NATURAL RESOURCES THAT WOULD BE HELPFUL TO EARTH.



HEY! THIS ISN'T SAND, IT'S BORAX! JUST LIKE IN DEATH VALLEY ON EARTH!

SAY! THAT MEANS IT MUST CONTAIN BORDON!

IT WAS A GREAT DISCOVERY. BORAX (CHEMICAL SYMBOL $\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}$) IS AN IMPORTANT COMPOUND OF THE BASIC ELEMENT BORON (CHEMICAL SYMBOL B—ATOMIC WEIGHT 10.82)



BORON CAN BE USED AS A VITAL INGREDIENT IN ROCKET FUEL! IT GIVES MORE THRUST THAN ANY OTHER PROPULSION MIXTURE!

ADMITTED. BUT WHAT GOOD DOES IT DO US? WE HAVEN'T GOT ANY ROCKETS.

AND WE CAN'T EAT IT!



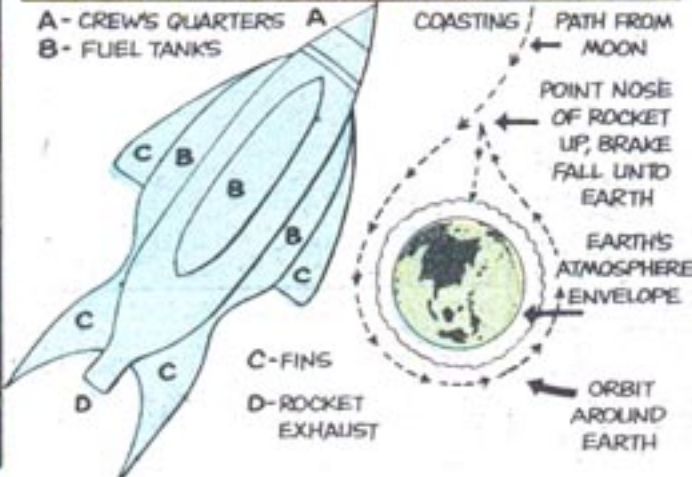
DON'T YOU SEE THE POSSIBILITIES? IT MEANS WE CAN SET UP A CHEMICAL PLANT HERE ON THE MOON TO MAKE ROCKET FUEL.

WHY, SURE! AND ROCKET SHIPS FROM EARTH CAN REFUEL FOR THE RETURN TRIP!

THAT'LL SOLVE THE BIGGEST PROBLEM OF SPACE TRAVEL... HOW TO GET A SHIP DOWN THROUGH EARTH'S ATMOSPHERE SAFELY!

"RIGHT! A SHIP MERELY HAS TO CARRY ENOUGH FUEL TO REACH THIS MOON. IT'LL CUT DOWN ITS WEIGHT ENORMOUSLY. THEN, WITH ITS TANKS REFILLED HERE, IT WILL HAVE PLENTY OF FUEL TO USE ROCKET BRAKES TO SLOW IT DOWN AND KEEP IT FROM BURNING UP WHEN IT HITS EARTH'S ATMOSPHERE!"

A - CREW'S QUARTERS
B - FUEL TANKS



AND THEN, INSTEAD OF USING A SPACE STATION ABOVE EARTH FOR A STARTING PLACE FOR JOURNEYS TO MARS OR VENUS THEY CAN USE THE MOON!

THE IDEA OF A SPACE STATION WAS NEVER PRACTICAL.

TOO MANY PROBLEMS HAD TO BE OVERCOME.

"IT WAS TRIED BUT DIDN'T WORK OUT. THAT'S WHY WE WERE SHOT HERE ON A ONE-WAY TRIP. FIRST THERE WAS THE PROBLEM OF SETTING EACH PREFABRICATED SECTION OF THE SPACE STATION IN EXACTLY THE RIGHT ORBITAL SPEED AND DIRECTION..."



"ONE SLIGHT ERROR SENT MEN AND MATERIAL HURTLING INTO SPACE TO FALL EVENTUALLY INTO THE SUN OR CRASH BACK ONTO EARTH!"



"AND THE FIRST MEN SENT UP TO PUT THE PREFABRICATED SPACE STATION PARTS TOGETHER FOUND THE CONTRAST BETWEEN THE SUN'S HEAT ON ONE SIDE OF THEM AND THE FRIGID COLD OF SPACE ON THE OTHER, TOO GREAT FOR THE HUMAN BODY TO ENDURE."



AND THOSE WERE ONLY A FEW OF THE PROBLEMS ENCOUNTERED.

I KNOW. CARELESSNESS WAS ANOTHER GREAT HAZARD.

FEW MEN COULD ADJUST THEIR BODIES TO SUCH CONDITIONS.



BUT NOW, WITH OUR UNDERGROUND BASE ON THE MOON, OXYGEN TO BE TAKEN FROM THE AGE-OLD ICE AND A SOURCE OF FUEL WE'VE GOT IT MADE!

YESSIR! LET'S RADIO EARTH TO START SHOOTING US THE THINGS WE NEED TO BUILD A CHEMICAL PLANT.



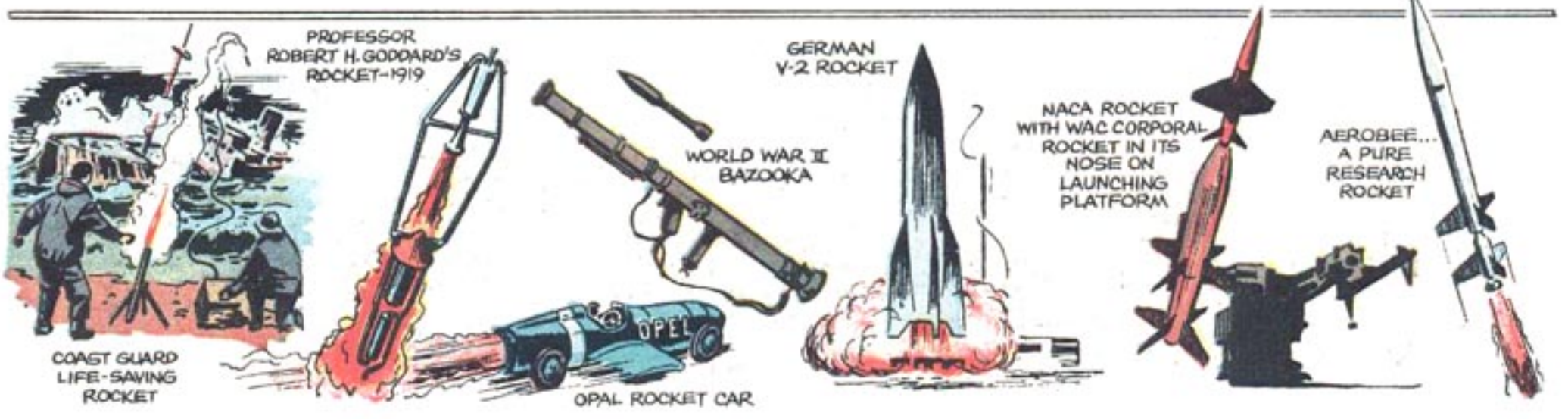
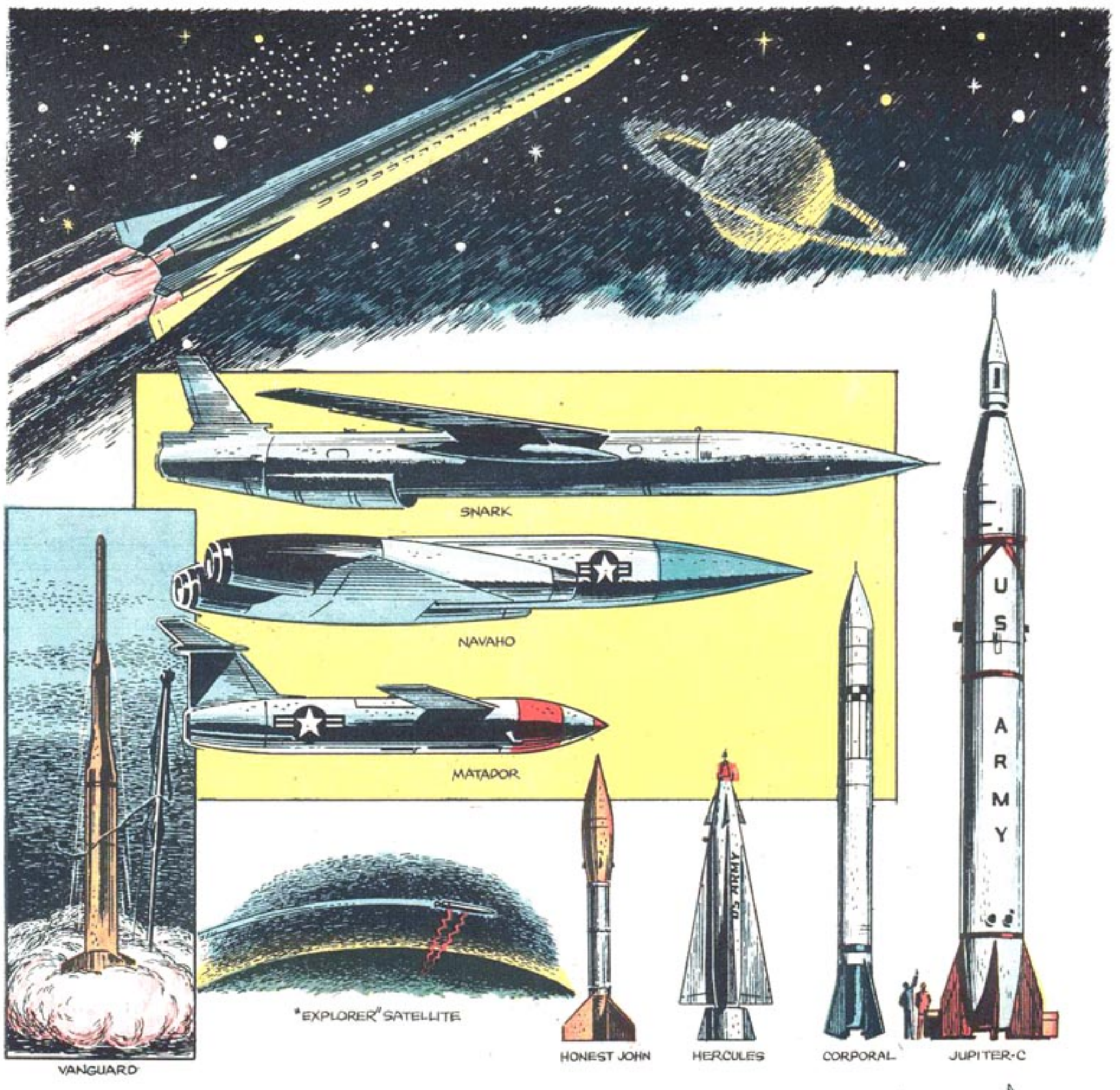
EARTH HEADQUARTERS AGREED WITH OUR PLAN! THEY'LL PREFABRICATE MOST OF THE PLANT AND SEND IT TO US IN SECTIONS.

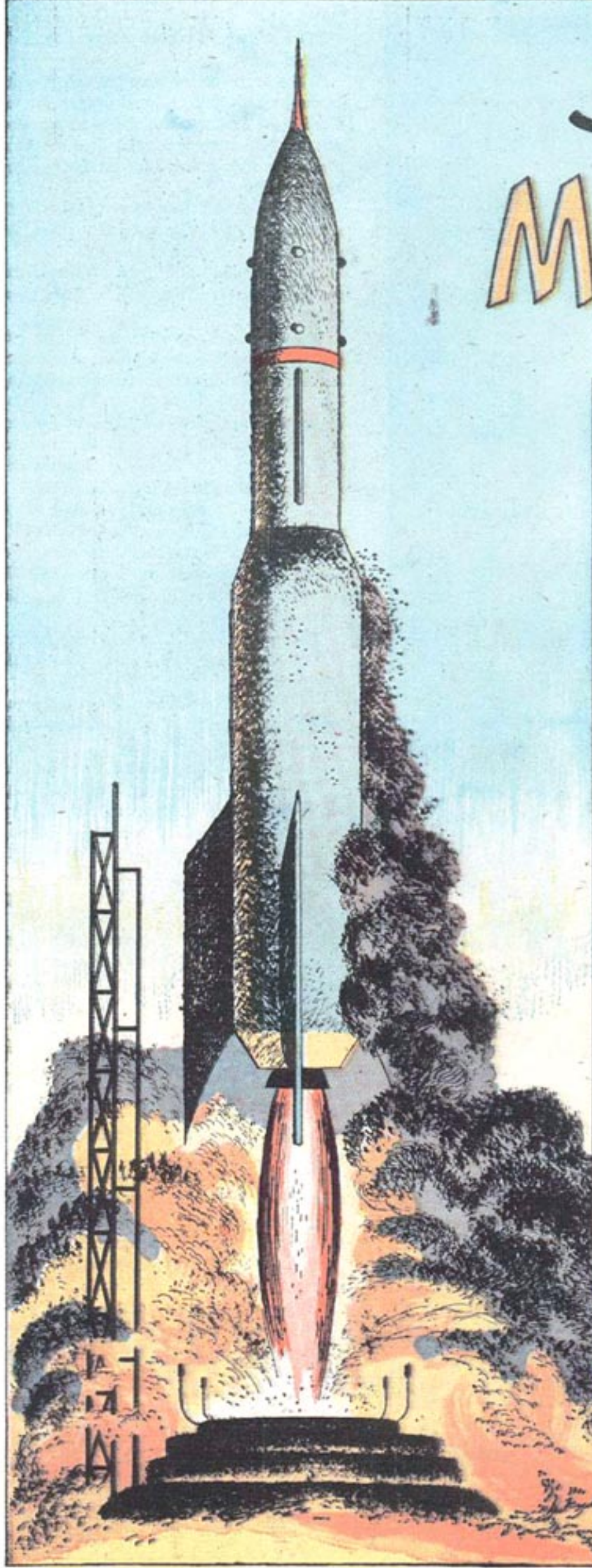
AT LAST WE'LL ESTABLISH A REAL MOON COLONY!

AND WE'LL BE ABLE TO RETURN TO EARTH SOME DAY... I HOPE!



THE DEVELOPMENT OF THE ROCKET!





Secret of the MONARCHS

by William F. Hallstead

"Frankly, Lieutenant Kris, the reason why we asked you to apply for two weeks of active duty isn't to meet your Air Force Reserve training requirements at all."

Colonel Shipley leaned back in his desk chair and motioned to tall, dark-haired Everett Kris. "Sit down, Lieutenant. I've got a special assignment for you."

Ev Kris had received a letter from the Air Force a week ago. "You are hereby requested to make immediate application for a two-week tour of active duty," it had read. Ev knew he had already met all of his Air Force Reserve training requirements. But something about the way the letter was written made him answer the request. Seven days later, he landed his cream and red Piper Pacer at nearby Paramore Airport and reported to Colonel Mansfield Shipley, the stocky, gray-browed commander of Cape Jonas Missile Test Center on the eastern shore of Virginia.

Colonel Shipley studied the slender first lieutenant seated before him. "Kris, Security says you're the man for the job. They tell me you run a detective agency back in Chicago."

"I'm afraid I haven't been told much about the job, Colonel," Ev said. "Can't your regular security men—"

"Precisely what I thought at first, Kris. But something's really gone wrong with our security. I've assigned half a dozen men—good men—to this thing. Not a one of them got to first base. It's our opinion that somebody has access to our files and knows who the security agent is as soon as we assign him to the case."

"But won't the same thing happen with me?"

"I've called you in myself on sheer hunch and hope," Colonel Shipley said. "I knew your old C. O. overseas, and he thought a

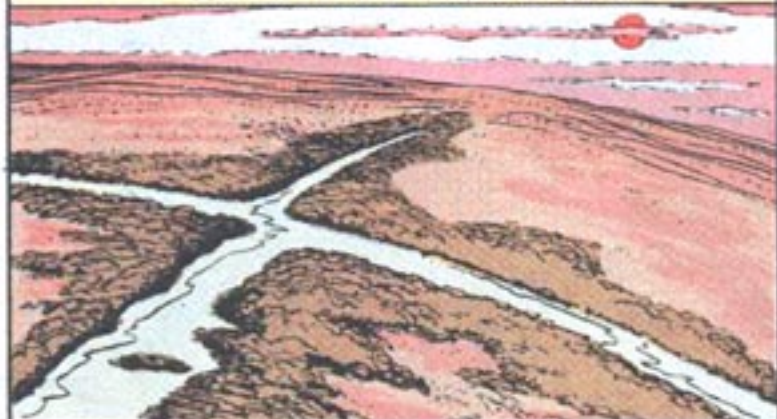
SPACE CONQUERORS!



DURING THE TWO WEEKS OF NIGHT AT MOON BASE, WHEN DUTIES ARE FEW, THEORIES ABOUT LIFE EXISTING ON OTHER PLANETS ARE DISCUSSED BY THE CREW.



"I CAN PROVE IT BY COMPARING THINGS THAT LIVE ON EARTH UNDER CONDITIONS NEARLY IDENTICAL TO THOSE WE KNOW EXIST ON MARS. FOR EXAMPLE..."



"WE ARE PRETTY SURE MARS HAS OXYGEN IN ITS ATMOSPHERE, ICE CAPS AT ITS POLES, WATER FROM MELTING ICE DURING ITS SUMMER AND GREEN VEGETATION..."

"THERE ARE DESERT AREAS ON EARTH THAT HAVE SIMILAR CONDITIONS, AND THINK OF THE PLANTS AND CREATURES IN THE DESERT..."

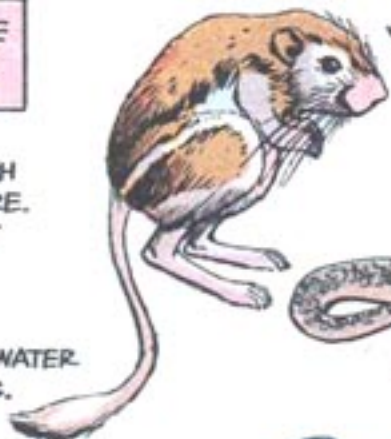


"SMOKE TREES THAT FLOURISH WITH VERY LITTLE MOISTURE. DURING DRY SEASONS THEY SHED THEIR LEAVES TO CONSERVE WATER..."

"CACTUS THAT STORES WATER IN ITS FLESHY STEMS."



"SAGEBRUSH, MESQUITE AND PALMS THAT GROW IN EXTREMELY DRY PLACES..."



"KANGAROO RATS THAT NEVER NEED WATER..."



"LIZARDS, SNAKES AND HIGHER FORMS OF ANIMALS..."



"ANTS AND OTHER INSECTS THAT CAN LIVE UNDER THE MOST UNFAVORABLE CONDITIONS."



SPACE CONQUERORS!

by ALSTENZEL

FINDING UNLIMITED DEPOSITS OF BORON ON THE MOON WAS A MOST IMPORTANT DISCOVERY BY THE THREE MOON EXPLORERS SINCE BORON IS A VITAL INGREDIENT IN ROCKET FUEL. PREFABRICATED SECTIONS OF A CHEMICAL PLANT TO MANUFACTURE FUEL FROM BORON WERE ROCKETED TO THE MOON FROM EARTH HEADQUARTERS.

THERE SHE IS. A COMPLETE CHEMICAL PLANT READY TO PRODUCE AS MUCH ROCKET FUEL AS NEEDED, RIGHT AT THE ENTRANCE TO OUR UNDERGROUND BASE.

AND IT ONLY TOOK US A FEW MONTHS TO SET IT UP!

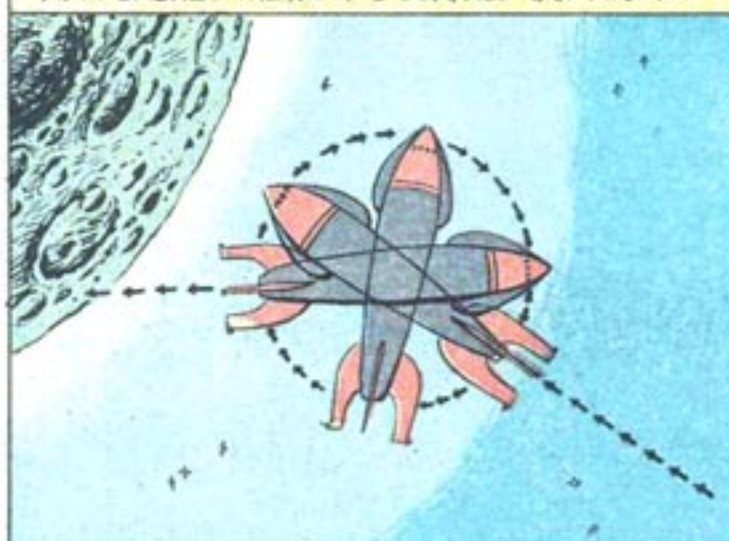
THAT'S BECAUSE OF THE MOON'S LIGHT GRAVITY. WE COULD NEVER HAVE HANDLED THOSE SECTIONS ON EARTH.



WITHIN A FEW MORE MONTHS THE FIRST
ROUND-TRIP ROCKET SHIP IS LAUNCHED
FROM ITS EARTH BASE...



WHEN THE SHIP REACHES THE MOON'S GRAVITATIONAL
INFLUENCE, GYROSCOPES TURN IT OVER SO THAT IT
APPROACHES THE MOON'S SURFACE TAIL FIRST...



...AND USING ITS ROCKETS FOR BRAKES
LANDS SAFELY ON THE MOON!



LOOK AT THAT
BABY SET ITSELF
DOWN!

LIGHT AS
A FEATHER!

THEY DON'T HAVE TO
WORRY ABOUT HOW MUCH
FUEL THEY USE NOW!

SORRY TO MAKE YOU WAIT
BUT WE HAD TO LET IT COOL
OFF BEFORE WE
GOT OUT.

DON'T
WORRY ABOUT
THAT! WE'RE
MIGHTY GLAD
YOU'RE
HERE.

WELCOME TO
LUNAR BASE
ONE!



HERE'S THE LATEST PITCH. WITH
AN ADEQUATE FUEL SUPPLY
REGULAR MOON TRIPS FROM
EARTH AND BACK ARE NOW
SCHEDULED.

YIPPEE!
WE'RE NO
LONGER
MAROONED
HERE!

DON'T CHEER YET. I
HAVE A HUNCH THERE'S
MORE TO THIS!





SPACE CONQUERORS!

by AL STENZEL

NOW THAT WE CAN MAKE ROCKET FUEL HERE ON THE MOON, EARTH WILL BE SENDING MORE AND MORE PEOPLE HERE!

YES, THEY'RE PLANNING REGULAR EARTH-MOON SCHEDULES.

WELL! WE LICKED OUR FIRST ASSIGNMENT!

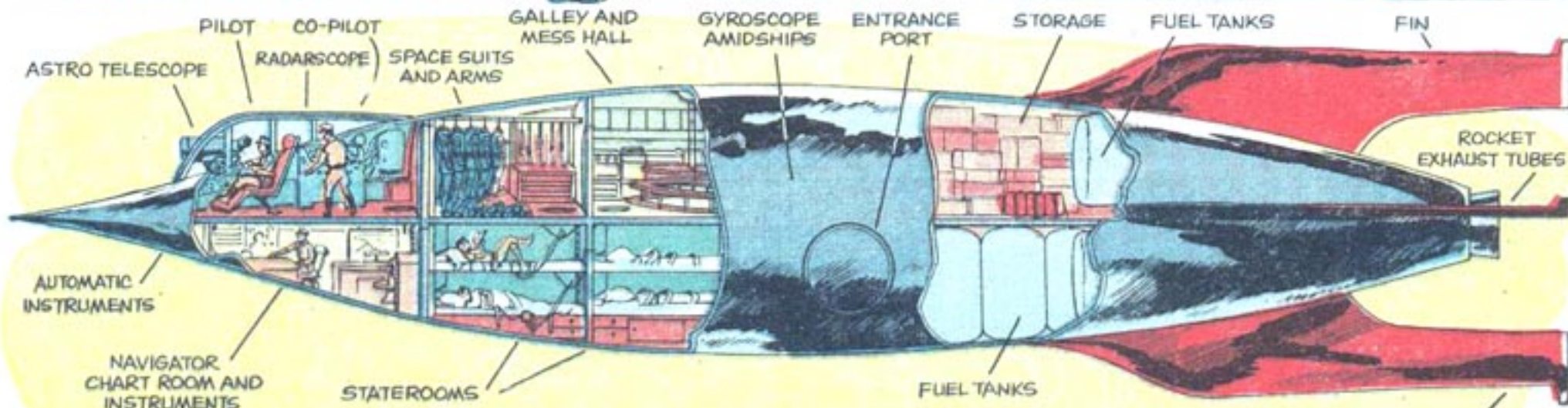
RIGHT! WE ESTABLISHED A MOON BASE.

AND NOW WE'RE PICKED FOR THE SAME THING ON MARS! HOPE THEIR SPACE-SHIP IS ALL THEY SAY IT IS.

SHE LOOKS PRETTY TRIM AND NEAT!

CAN'T TELL A SHIP BY ITS SHELL. LET'S GO ABOARD AND SEE WHAT SHE'S GOT INSIDE.

SHE'S A LOT BIGGER THAN THE NOSE CONE WE ARRIVED IN!



THIS IS A CROSS SECTION OF THE SPACESHIP IN WHICH THE THREE MEN WILL ATTEMPT A VOYAGE TO THE PLANET MARS.



THE THREE MOON EXPLORERS HAVE BEEN RELIEVED BY A GROUP FROM EARTH. NOW THEY ARE READY TO TAKE THE NEW SPACESHIP ON AN ATTEMPTED VOYAGE TO MARS.

THEY HOLD A BRIEFING SESSION WITH THE NEW BASE COMMANDER WHO HAD BROUGHT THEIR ORDERS FROM EARTH.

THIS IS STRICTLY A TEST FLIGHT. YOU ARE NOT TO ATTEMPT A LANDING ON MARS.

WE JUST CIRCLE THE PLANET AND RETURN TO THIS MOON BASE, EH?



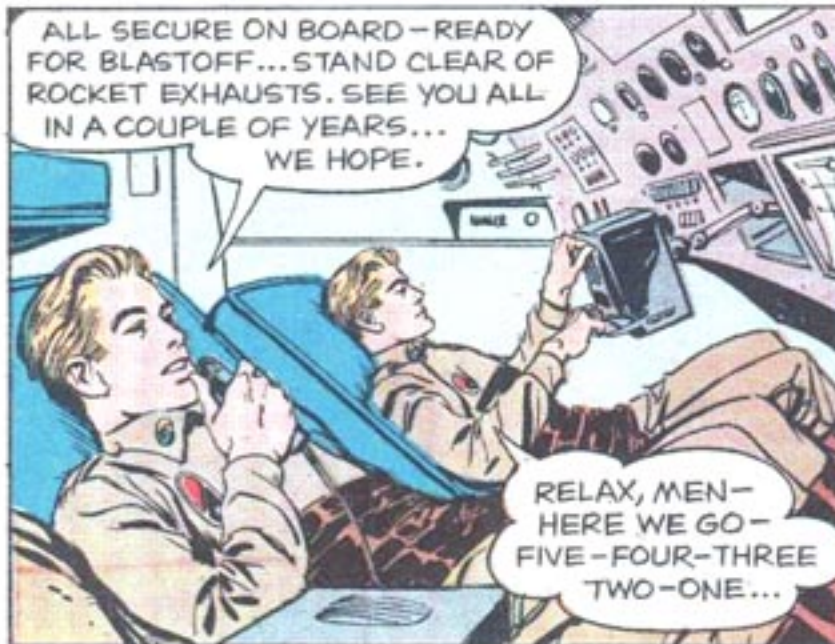
YOU HAVE PLENTY OF FOOD ON BOARD. YOU'LL HAVE TO BE CAREFUL WITH WATER. YOUR FUEL SHOULD TAKE YOU TO MARS AND BACK.

SHOULD, HE SAYS!



WON'T TAKE TOO MUCH FUEL TO GET AWAY FROM THE MOON'S PULL!

ALL SECURE ON BOARD - READY FOR BLASTOFF... STAND CLEAR OF ROCKET EXHAUSTS. SEE YOU ALL IN A COUPLE OF YEARS... WE HOPE.



RELAX, MEN - HERE WE GO - FIVE - FOUR - THREE - TWO - ONE...



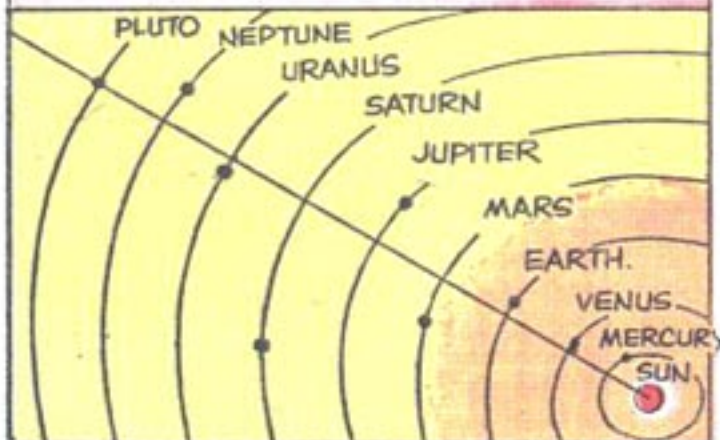
AFTER THE BLASTOFF THE MEN SETTLE DOWN TO THE MONOTONOUS ROUTINE OF TRAVELING THROUGH SPACE.

THINK YOU'LL BE ABLE TO HIT MARS ON THE NOSE, NAVIGATOR?

HOPE SO. A GOOD THING ABOUT OUR SOLAR SYSTEM...



"ALL THE PLANETS LIE IN ALMOST A FLAT PLANE. WHEN YOU DRAW A LINE FROM THE SUN OUT BEYOND PLUTO NEARLY ALL THE PLANETS AND MOST OF THEIR MOONS WILL PASS WITHIN A FEW DEGREES OF THE LINE WHICH IS CALLED THE ECLIPTIC!"



I'VE CALCULATED WHERE MARS WILL BE WHEN WE REACH HER ORBIT

WHAT HAPPENS IF MARS ISN'T THERE AT THAT TIME?



WE'D HAVE TWO CHANCES. CIRCLE AND WAIT FOR HER OR DRIFT INTO SPACE FOREVER!

HM-M-NICE CHOICES.

LET'S HOPE YOUR ORIGINAL CALCULATION IS ON THE BUTTON!



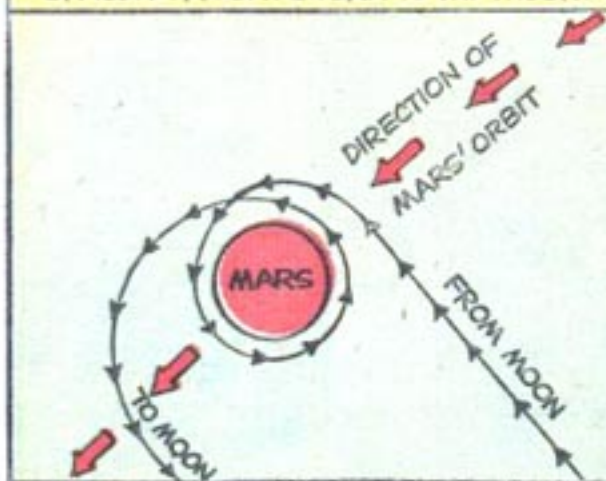
COULDN'T WE JUST TURN AROUND AND RETURN TO THE MOON BASE?

MAYBE-BUT IT WOULD TAKE A LOT OF FUEL.

WHICH WE HAVEN'T GOT TO SPARE!



"WE MUST USE MARS' GRAVITATIONAL PULL TO SLOW US DOWN TO TAKE THE PHOTOGRAPHS AND USE HER SPEED ALONG HER ORBIT TO THROW US BACK INTO SPACE FOR OUR RETURN TO THE MOON!"



WELL, WE'RE POINTED IN THE RIGHT DIRECTION. ALL WE CAN DO NOW IS SWEAT IT OUT.

HO-HUM-NOTHING TO DO FOR A LONG WHILE!

SOME DAY SPACE TRAVEL WILL BE AUTOMATIC AND THE PASSENGERS WILL BE PUT ON ICE UNTIL THEY REACH THEIR DESTINATION.



SPACE CONQUERORS!

by AL STENZEL



AS THE SPACESHIP ZOOMS THROUGH THE VOID ON ITS JOURNEY TO MARS THE THREE-MAN CREW PASS THE LONG HOURS READING AND RELAXING.

I WONDER IF THERE ACTUALLY ARE CANALS ON MARS AS SOME ASTRONOMERS CLAIM.



THEY WERE FIRST REPORTED BY AN ASTRONOMER NAMED SCHIAPARELLI IN 1877. BUT THEY HAVE NEVER BEEN PHOTOGRAPHED.

THAT'S BECAUSE OF AIR CURRENTS IN THE EARTH'S ATMOSPHERE. IT BREAKS UP SMALL DETAILS.



BUT THEY HAVE BEEN SEEN THROUGH TELESCOPES. AND THEY CERTAINLY APPEAR TO HAVE BEEN MADE BY INTELLIGENT BEINGS.



"AT LEAST WE KNOW THERE IS SOME ATMOSPHERE ON MARS ALTHOUGH NOT MUCH OXYGEN. IT'S MOSTLY CARBON DIOXIDE AND WATER VAPOR."

BEING 141,600,000 MILES DISTANT FROM THE SUN IT MUST BE PRETTY COLD ON MARS.



YET IT HAS ITS SEASONS. ITS POLAR ICE CAP EXPANDS AND CONTRACTS IN SUMMER AND WINTER.



"AND ITS USUAL RED COLOR TURNS A DARK GREEN IN THE SUMMER. IF THAT'S VEGETATION THERE MUST BE ANIMALS OR INSECTS, TOO!"

AND IF THERE'S ANY KIND OF LIFE THERE, WHY NOT INTELLIGENT BEINGS -



RIGHT - WELL, THAT'S WHAT WE'RE SUPPOSED TO FIND OUT!

HEY - HOW ABOUT ONE OF YOU RELIEVING ME ON WATCH!

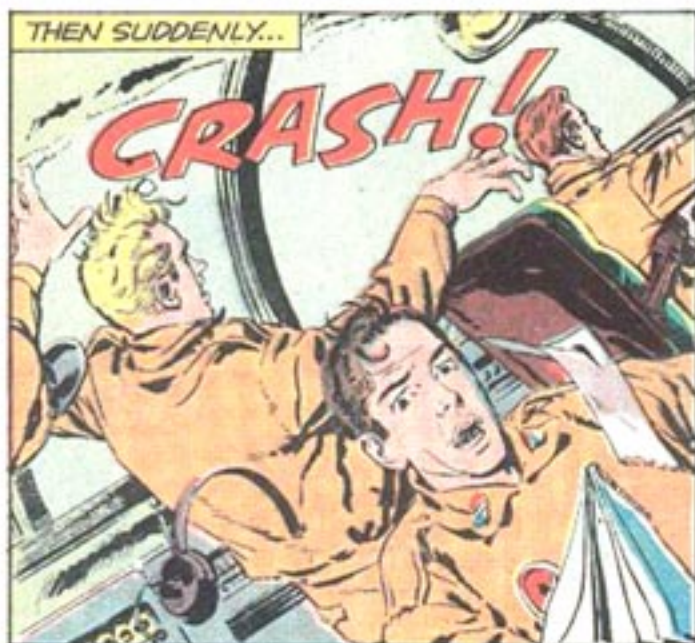


by AL STENZEL

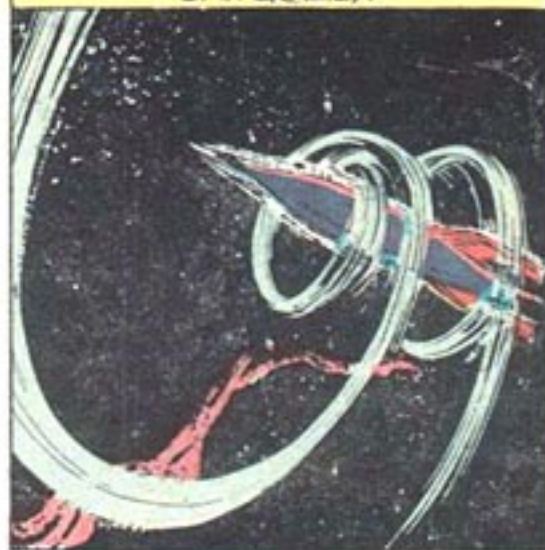
RUSHING THROUGH THE TRACKLESS HEAVENS AT INCREDIBLE SPEED THE SPACESHIP FROM THE MOON BASE NEARS ITS DESTINATION—MARS!



AS THE MINUTES TICKED BY THE RED PLANET GREW LARGER AND LARGER THROUGH THE WINDOWS OF THE SHIP'S OBSERVATION BUBBLE.



THE TERRIFIC SHOCK FROM SOME UNKNOWN CAUSE MADE THE SHIP SPIN CRAZILY.



ONE OF THE MEN CRAWLED BACK INTO THE MAZE OF PIPES AND DIALS IN THE STERN. HE MADE A HORRIBLE DISCOVERY...

THE OUTER HULL HAS BEEN PUNCTURED. THE FUEL LINES TO THREE OF THE ROCKETS ARE BLOCKED!



WE'LL HAVE TO LAND AND MAKE REPAIRS. I'LL TRY MAR'S SMALL MOON, DEIMOS—I DON'T DARE TRY TO LAND ON MARS ITSELF—EVEN ITS LESSER GRAVITY WOULD CRASH US TO BITS IN OUR PRESENT CONDITION!



...IF YOU CAN STRAIGHTEN OUT THE SHIP'S COURSE!

IT'LL BE CLOSE! I'LL SHUT OFF THE GYROSCOPES AND TRY TO BELLY-LAND ON ONE ROCKET. STRAP YOURSELVES SECURELY—HERE WE GO...



THE PILOT CAREFULLY MANEUVERS THE SHIP INTO DEIMOS' ORBIT. SINCE THE TINY MOON, ONLY FIVE MILES IN DIAMETER, HAS PRACTICALLY NO GRAVITATIONAL PULL THE SHIP WON'T CRASH PROVIDED ITS SPEED CAN NEARLY MATCH THAT OF THE SATELLITES.



EASY-EASY DOES IT! GOTTA SET HER DOWN GENTLY—ANOTHER BLAST ON THE ROCKET...THERE...NOW...



WE MADE IT! NICE GOING, SKIPPER!



MARS SURE LOOKS BEAUTIFUL FROM HERE!

WE'LL SEE HOW NICE IT IS AFTER WE CHECK ON HOW BADLY DAMAGED WE ARE!

SPACE CONQUERORS!

by AL STENZEL

THE FIRST SPACESHIP TO ATTEMPT A VOYAGE TO MARS IS STRANDED ON MARS' OUTER MOON, DEIMOS, WITH A PUNCTURED HULL AND CLOGGED FUEL LINES.





IF YOU ARE NOT YET A CUB SCOUT, BOY SCOUT OR EXPLORER, You're Invited!

SEND THIS COUPON TO

BOYS' LIFE

NEW BRUNSWICK, NEW JERSEY

PLEASE TELL ME HOW I CAN GET IN ON ALL THIS ADVENTURE AND FUN!

NAME _____

AGE _____

STREET & NO. _____

TOWN _____

ZONE _____ STATE _____